

Exhibit 1

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

MATCH GROUP, LLC

Plaintiff,

V.

BUMBLE TRADING INC.

Defendant.

§ § § § § § § § § § § § § § § §

Civil Action No. 6:18-cv-00080

JURY TRIAL DEMANDED

PLAINTIFF MATCH GROUP, LLC'S ORIGINAL COMPLAINT

I. INTRODUCTION

Match Group, Inc. is the worldwide leader in online dating, with multiple popular brands of matchmaking services, including Match, Plenty of Fish, OkCupid, and more. Plaintiff Match Group, LLC, a wholly-owned subsidiary of Match Group, Inc., owns Tinder and its related intellectual property. Tinder is one of Match’s flagship brands. When released, it launched a cultural revolution in social networking and online dating. Tinder is famously characterized by a stack of swipeable cards containing photographs of potential matches nearby. If a user is interested in the person shown, the user swipes right. If not, the user swipes left. If two users swipe right on each other, a match has been made, and the users are permitted to communicate with one another through the app. The app has become so well-known that an entire generation is often described as the “Tinder generation.”

Match, through Tinder, spent significant time and effort developing and implementing the inventions embodied in versions of the Tinder app and claimed in a recently issued utility patent. Match, through its Tinder team, has spent significant time and money advertising the

Tinder brand, including Tinder's unique card-based swipe design. Match has also spent significant time and money designing an attractive, artistic app, protected by both design patents and copyrights. And Match has spent significant time and money on confidential internal research and development, including brainstorming potential feature roll-outs. As a result of all of these efforts, Match has significant intellectual property rights related to the Tinder application and the Tinder brand. This is a case about infringement and misappropriation of that intellectual property.

Bumble, founded by three ex-Tinder executives, copied Tinder's world-changing, card-swipe-based, mutual opt-in premise. As acknowledged by third-party publications upon its release, Bumble is "virtually identical" to Tinder in its functionality and general look-and-feel. The competitive reason is obvious. Bumble sought to mimic Tinder's functionality, trade off of Tinder's name, brand, and general look and feel, meet user expectations that Tinder itself and its brand created, and build a business entirely on a Tinder-clone, distinguished only by Bumble's women-talk-first marketing strategy. Compounding matters, Bumble has released at least two features that its co-founders learned of and developed confidentially while at Tinder in violation of confidentiality agreements. All of these actions infringe upon Match's valid and enforceable intellectual property rights.

To be clear, this case is not about any Bumble personnel's personal history with anyone previously at Tinder. This case is not about feminism or a business marketed based on feminist themes; Match applauds Bumble's efforts at empowering women, both in its app and offline, and Match cares deeply both about its women users and about women's issues generally. Rather, this case is simply about forcing Bumble to stop competing with Match and Tinder using

Match's own inventions, patented designs, trademarks, and trade secrets. Match brings this complaint to stop Bumble's unlawful use of this intellectual property.

II. THE PARTIES

1. Plaintiff Match Group, LLC ("Match") is a Delaware Corporation with a principal place of business in Dallas, Texas at 8750 N. Central Expressway, Suite 1400.

2. Bumble Trading Inc. ("Bumble") is a Delaware corporation with a principal place of business at 1105 W 41st St., Austin, TX 78756.

3. Although Bumble Trading Inc. continues to conduct business in Texas, as of the date of filing this complaint, Bumble has failed to comply with Texas's franchise tax laws.

4. As of March 16, 2018, Bumble Trading Inc. forfeited its charter and corporate privileges under Section 171.309 of the Texas Tax Code.

III. JURISDICTION AND VENUE

5. This Court has personal jurisdiction over Bumble Trading Inc. consistent with the requirements of the Due Process Clause of the United States Constitution and the Texas Long Arm Statute. Bumble conducts business, maintains an established place of business, and has committed acts of patent infringement and/or has induced and/or has contributed to acts of patent infringement by others in the Western District of the Texas, the State of Texas, and elsewhere in the United States. In addition, Bumble's headquarters and principal place of business is located in Austin, Texas, within the District.

6. This Court has original subject matter jurisdiction over Match's claims for patent infringement pursuant to the Federal Patent Act, 35 U.S.C. § 101 *et seq.* and 28 U.S.C. §§ 1331 and 1338(a). This Court has original subject matter jurisdiction over Match's federal trade secret claim pursuant to 18 U.S.C. §§ 1836-39 *et seq.* ("Defend Trade Secrets Act") and 28 U.S.C. §§ 1331 and 1343. The Court also has supplemental jurisdiction over the state law claims pursuant

to 28 U.S.C. § 1367.

7. Venue is proper in this District for Bumble Trading Inc. under 35 U.S.C. § 1400(b) because Bumble Trading Inc. has a regular and established place of business in Austin, Texas and has committed acts of infringement in the District by making, using, and selling the Bumble app in the District. Venue is also proper for Match's remaining claims against Bumble under 28 U.S.C. § 1391 because Bumble resides in the District, has its principal place of business in the District, is subject to personal jurisdiction in this District, and a substantial part of the events or omissions giving rise to the claim(s) occurred within the District.

8. The Waco Division of the Western District of Texas is convenient for both parties. The Waco Federal Courthouse is less than 100 miles as the crow flies from both Bumble's Austin-based headquarters and Match's Dallas-based headquarters.

9. Match also has a significant server deployment in the Waco area.

10. Bumble, meanwhile, employs at least four people at Baylor University. One campus director, along with three campus ambassadors, plan events on and around the Baylor campus to promote the Bumble app amongst Baylor University students.

IV. FACTUAL ALLEGATIONS

A. The Creation of Tinder

11. The Tinder app was first conceived at and created by "Hatch Labs," a technology incubator owned by Match's ultimate parent company, InterActive Corp ("IAC"). Sean Rad, Justin Mateen, Jonathan Badeen, Joe Munoz, Chris Gulczynski, Whitney Wolfe-Herd, and others formed the early Tinder team that conceived, designed, developed, and conducted initial marketing efforts for the Tinder app.

12. Chris Gulczynski's position as Tinder was "Lead Designer" or "Chief Creative." Gulczynski was integral in designing the general look and feel of the earliest iterations of the

Tinder app.

13. Whitney Wolfe-Herd's position with Tinder was "Vice President of Marketing." She assisted in promoting the app and encouraging users to sign up in the app's early days.

14. Sarah Mick joined Tinder in 2013, after Tinder's initial launch. Mick's title was "Vice President of Design" and she assisted Gulczynski on various design aspects of the Tinder interface.

15. Released in September 2012 for iPhone devices, Tinder revolutionized online dating services. From its earliest days, the premise of Tinder has been fundamentally the same. Tinder users are shown other users ("potential match(es)") based on certain parameters, including age range and geographic location. The user is shown a card with a photo of a potential match nearby. The user is then given a choice to indicate interest (or lack thereof) in the potential match merely by swiping the card right (if interested) or left (if not). Although the earliest iterations of Tinder did not include the ability to swipe left or right, once implemented, swiping on Tinder became a cultural sensation.

16. Tinder is now one of the most popular apps in the world.

B. Match's Tinder-Related Intellectual Property

17. Match has been awarded a utility patent, U.S. Patent No. 9,733,811 (the "'811 Patent"), entitled "Matching Process System and Method," in connection with the functional innovations embodied in versions of the Tinder app. The '811 Patent is attached as Exhibit A.

18. Match has also been awarded numerous design patents related to ornamental aspects of the Tinder app. One such patent, United States Patent No. D798,314 (the "'314 Patent"), entitled "Display Screen or Portion Thereof With a Graphical User Interface of a Mobile Device," issued September 26, 2017. The '314 Patent is attached hereto as Exhibit B.

19. Match also has a federally registered trademark, Reg. No. 4,465,926, for "swipe"

in connection with computer application software for mobile devices, namely, software for social introduction and dating services. Tinder first used this mark in commerce on or around March 28, 2013. The registration for Tinder's "swipe" mark is attached as Exhibit C.

20. Match is also currently seeking federal registration for "swipe left" and "swipe right" in connection with mobile applications for social introduction and dating services.

21. Match also has common law trademark rights. For example, Match, through Tinder, has used the marks "swipe left" and "swipe right" in connection with mobile applications for social introduction and dating services nationwide. It first used these marks in commerce on or around March 28, 2013.

22. "Swipe," "swipe left," and "swipe right" have become synonymous with the Tinder app.

23. For example, the Telegraph listed "swipe" as a 2015 "word of the year," writing that its choice "reflect[ed] the popularity of the dating app Tinder, in which users can swipe their finger across the screen to approve or dismiss would-be dates."

24. The English Oxford Dictionary also specifically defines the terms "swipe right" and "swipe left" in connection with the Tinder brand:

Phrases

swipe right (or left)

informal (on the online dating app Tinder) indicate that one finds someone attractive (or unattractive) by moving one's finger to the right (or left) across an image of them on a touchscreen.

'I swiped right, but sadly for me, she swiped left'

25. The English Oxford Dictionary also indicates that "swipe right (or left) of dating app Tinder fame" was consistently one of the dictionary's most "popular look-ups" in 2017.

26. Indeed, Tinder's wordmarks have been famous since before Bumble even existed. For example, in a February 2014 article in TIME Magazine, TIME described the swipe in Tinder

as “iconic.”

27. Similarly, in February 2015, a CIO.com article described Tinder’s “swipe right” as a “trademark” of Tinder.

28. In fact, the Atlanta Hawks, in connection with Tinder, hosted a highly publicized “Swipe Right Night” at an Atlanta Hawks game in January 2015, reflecting the then-existing fame of the mark.

29. Match, through Tinder, also has legally protectable trade dress. For example, the ornamental design claimed in US D798,314 is a non-functional design element with source-identifying significance, either because it is inherently distinctive or has acquired secondary meaning.

30. Match, through Tinder, regularly advertises this design, showing a user’s card being swiped left or right.



31. Third-party Internet publications have recognized that this design is synonymous with Tinder, describing the “Tinder swipable cards interface” as “famous” and as taking “the app store by storm.”

32. This card swipe interface has also been described as “iconic.”

33. Indeed, this interface is so well-known and iconic that, when other businesses use similar interfaces in connection with non-social network, non-dating apps, third-party publications describe such uses as making the app look like Tinder.

34. As reflected by the United States Patent and Trademark Office’s decision to grant the ’314 Patent, this card-swipe design is non-functional.

35. Similarly, Match has protectable trade dress in its “It’s a Match!” screen, shown below:



36. As with the swipeable card interface, this screen has distinctive trade dress source-identifying significance.

37. Match, through Tinder, also regularly uses this screen as a source-identifier in various advertising materials, including in the Apple App Store, the Google Play Store, and on YouTube.

38. Finally, Match, like most companies, has trade secrets related to confidential business planning and research and development efforts.

39. Match Group, LLC owns all rights to the intellectual property identified above.

C. Whitney Wolfe-Herd, Chris Gulczynski, and Sarah Mick Leave Tinder and Create a Tinder Copycat, Bumble.

40. As discussed above, the early Tinder team included Sean Rad, Justin Mateen, Jonathan Badeen, Joe Munoz, Chris Gulczynski, Whitney Wolfe-Herd, and others. In December 2013, Chris Gulczynski and Sarah Mick left Tinder. Wolfe-Herd left Tinder shortly thereafter. Exactly one year after the effective date of Chris Gulczynski and Sarah Mick's severance agreements, Gulczynski, Mick, Wolfe-Herd, and Andrey Andreev, the founder and CEO of Badoo, another online dating competitor, launched "Bumble."

41. Like Tinder, Bumble is a mobile dating app that relies on a blind mutual opt-in premise before users communicate. For those seeking opposite gender relationships, Bumble requires the female user to send the first message.

42. In the words of the publication TechCrunch, Bumble is "almost *identical* to Tinder, complete with the design of the profile pages, setting, and swipe functionality." (emphasis in original).

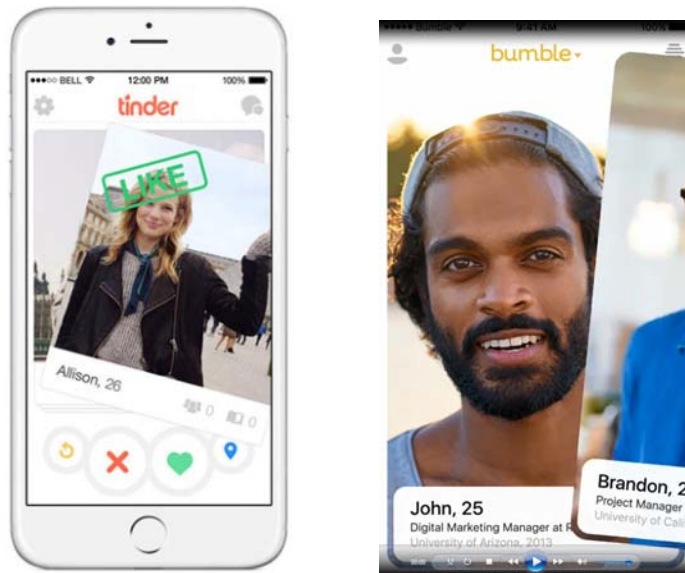
43. Texas Monthly recently wrote of Bumble: "the app looked suspiciously like Tinder. . . . [I]t has that famous swipe-right-to-match function, a piece of game play so brilliant it had become a cultural reference point."

44. Multiple other publications, such as BGR and the Los Angeles Business Journal, have described Bumble as a "Tinder-lookalike."

45. Like Tinder, Bumble users interact with "cards" containing photos of other users, as shown below.



46. Like Tinder, Bumble users swipe left and right on cards containing user photos to indicate whether or not the user is interested in the person shown.



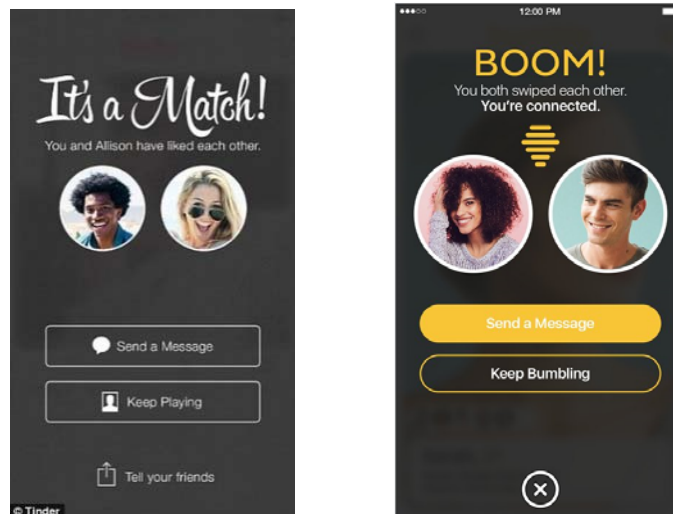
47. Like Tinder, swiping left indicates a user is not interested in the person shown while swiping right indicates that the user is interested in the person.

48. Like Tinder, two users cannot communicate over Bumble until they both indicate interest in one another.

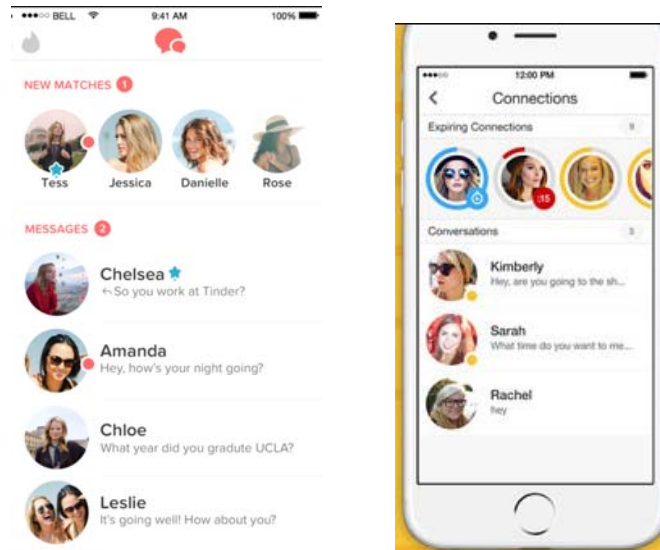
49. Like Tinder, if two users both indicate interest, a screen is shown indicating a

“match.”

50. Bumble’s “match” screen is nearly identical to Tinder’s. At the top of the screen is a large exclamatory phrase set off in a font other than the app’s default font. Below that, text indicating that the users have expressed a mutual interest is displayed in the app’s default font. Below that, two circles, enclosed in white borders, display the photographs of the matched users. Below that, both apps include similarly sized and shaped buttons first presenting the option to either send a message and then, below that, giving the option to return to the swipe screen. Both “match screens” are placed against a dark background. These similarities are shown in the pictures below:

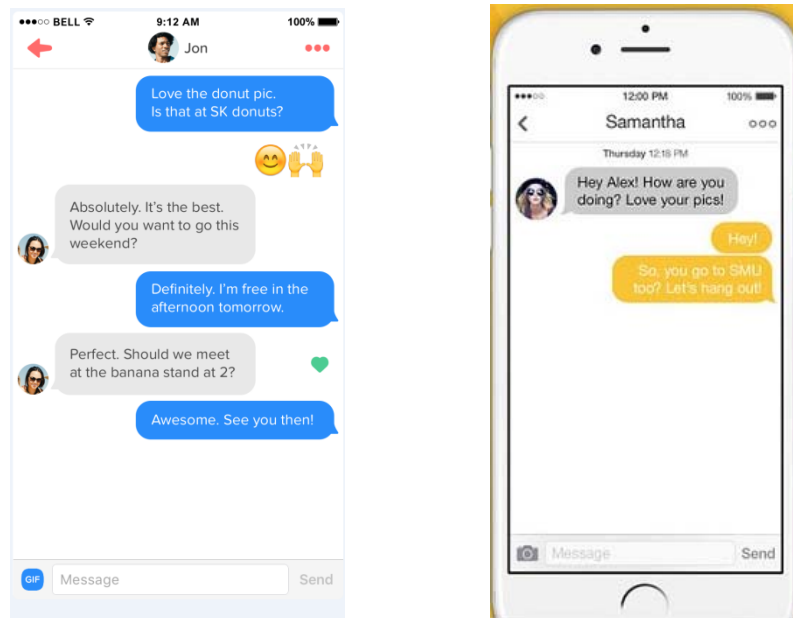


51. The “match queue” screen, where users can find new matches and ongoing conversations with other matches, is also essentially identical. The screens include circle contacts of various users at the top indicating matches for which no messages have been sent. These contacts can be scrolled through horizontally. Below that is a “messages” or “conversations” navigation menu, situated for vertical scrolling, where ongoing conversations are selectable:



52. One third-party publication noted when reviewing Bumble’s user interface that this “match queue” is “mostly lifted from Tinder.”

53. The look and feel within the chat screen is also nearly identical, as shown below:



54. Compounding the confusion from the copycat looks of the Bumble app, Bumble also makes extensive use of Tinder’s registered “swipe” mark as well as its “swipe left” and “swipe right” word marks.

55. For example, in its “About Us” section of its website, Bumble describes itself as

an app that “shows you the people you want to see and lets you connect by a mutual opt in by swiping right.”

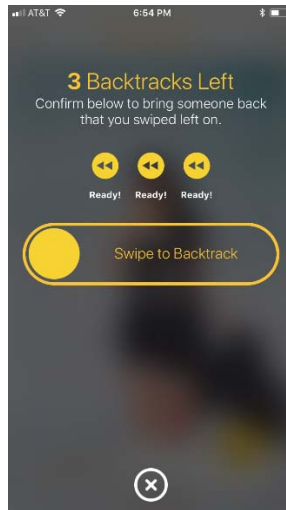
56. On its preview in the Apple App Store and Google Play Store, Bumble indicates that it is an “industry-leading app [that] empowers users to swipe through potential connections across three different modes”

57. Bumble’s “July 2017 Press Stats Visual,” located on its website, describes the number of “swipes per month” Bumble receives in its app.

58. Bumble’s “the Beehive” blog also contains dozens of instances of Bumble using the “swipe” term in connection with online or mobile matchmaking services.

59. Additionally, Bumble includes a section of “Frequently Asked Questions” inquiring as to (1) why a user “r[a]n out of people to swipe on”; (2) why a user can’t “start a conversation with somebody [the user has] swiped right on”; and (3) whether a user can “go back” if the user “swiped the wrong way.” Bumble describes its “Backtrack” feature as a way to deal with the situation where a user “accidentally swiped left.”

60. Bumble’s “backtrack” screen also makes prominent use of the swipe and swipe left marks, asking a user to “confirm below to bring someone back that you swiped left on” and to “swipe to backtrack”:



61. In press interviews, Bumble’s CEO repeatedly references “swipes,” “swipe lefts” and “swipe rights.” For example, in a CNBC interview, located at <https://www.youtube.com/watch?v=jyOMHVRrZo>, Bumble’s CEO discusses “swiping for opportunity,” “swiping to network,” “swipe left for no,” “swipe right for yes,” and that Bumble was getting “a lot of swipes.”

62. Similarly, Bumble’s CEO described in a Fox Business interview on November 23, 2015, located at <https://www.youtube.com/watch?v=m5Ej92-mKkg>, that on Bumble “you swipe on one another, and so if you both mutually opt in to have a match . . . you swipe right on her, she swipes right on you, it’s a connection.”

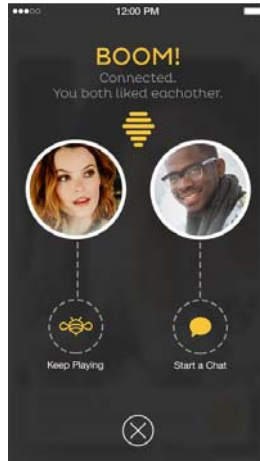
63. In another interview, from CNN Money on February 11, 2016, Bumble’s CEO described Bumble’s app as “swip[ing] right or left on potential matches.”

64. Bumble’s official advertising also makes use of the “swipe right” term. In an advertisement where two Bumble personnel provide tips for writing dating “bios,” one of the “doctors” indicates that she would “swipe right” on a bio she found particularly clever.

65. In fact, it appears Bumble has taken additional, affirmative steps since its initial release to co-opt Match’s trademarks and trade dress and trade off of Tinder’s powerful brand.

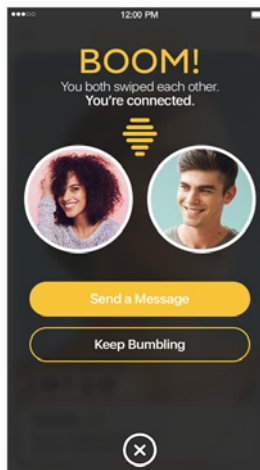
As discussed, in both apps, when two users express a mutual preference, a “match screen is shown.”

66. Bumble’s *original* match screen looked similar to Tinder’s match screen, but it had some notable differences, including the location of the of the message and “keep playing” buttons:



67. Moreover, the screen previously animated the circle photographs to pop out and drop below the “keep playing” and “start a chat” buttons, a feature not included in Tinder’s match screen.

68. Bumble has since updated to its app to mirror Tinder’s. Moreover, Bumble decided to change the phrase “you both liked each other” to “you both swiped each other.”



69. In July 2017, Bumble also released a paid feature, the “SuperSwipe.”

FIRST CAUSE OF ACTION: UTILITY PATENT INFRINGEMENT BY BUMBLE

70. Match incorporates by reference the preceding paragraphs as if fully set forth herein.

71. Bumble directly infringes the ’811 patent by making and using a system that practices the claims of Tinder’s patent.

72. Claim 1 of the ’811 Patent claims:

A computer implemented method of profile matching, comprising:

electronically receiving a plurality of user online-dating profiles, each profile comprising traits of a respective user and associated with a social networking platform;

electronically receiving a first request for matching, the first request electronically submitted by a first user using a first electronic device;

determining a set of potential matches from the plurality of user online-dating profiles for the first user in response to receiving the first request;

causing the display of a graphical representation of a first potential match of the set of potential matches to the first user on a graphical user interface of the first electronic device, the first potential match corresponding to a second user;

determining that the first user expressed a positive preference indication regarding the first potential match at least by determining that the first user performed a first swiping gesture associated with the graphical representation of the first potential match on the graphical user interface;

in response to determining that the first user expressed the positive preference indication regarding the first potential match, automatically causing the graphical user interface to display a graphical representation of a second potential match of the set of potential matches instead of the graphical representation of the first potential match;

determining that the second user has expressed a positive preference indication regarding the first user after determining that the first user expressed the positive preference indication regarding the first potential match;

determining to enable initial communication between the first user and the second user in response to determining that both the first user has expressed the positive preference indication regarding the second user and the second user has expressed

the positive preference indication regarding the first user;

in response to determining to enable initial communication between the first user and the second user, causing the graphical user interface to display to the first user the graphical representation of the first potential match;

determining that the first user expressed a negative preference indication regarding a third potential match of the set of potential matches at least by determining that the first user performed a second swiping gesture associated with a graphical representation of the third potential match on the graphical user interface, the second swiping gesture different than the first swiping gesture, the third potential match corresponding to a third user;

preventing communication between the first user and the third user after determining that the first user has expressed the negative preference indication regarding the third user;

determining that the first user expressed a positive preference indication regarding a fourth potential match of the set of potential matches at least by determining that the first user performed the first swiping gesture associated with a graphical representation of the fourth potential match on the graphical user interface, the fourth potential match corresponding to a fourth user; and

preventing communication between the first user and the fourth user after determining that the fourth user has expressed a negative preference indication regarding the first user.

73. Claim 4 of the '811 Patent claims:

A non-transitory computer-readable medium comprising instructions that, when executed by a processor, are configured to:

electronically receive a plurality of user online-dating profiles, each profile comprising traits of a respective user and associated with a social networking platform;

electronically receive a first request for matching, the first request electronically submitted by a first user using a first electronic device;

determine a set of potential matches from the plurality of user online-dating profiles for the first user in response to receiving the first request;

cause the display of a graphical representation of a first potential match of the set of potential matches to the first user on a graphical user interface of the first electronic device, the first potential match corresponding to a second user;

determine that the first user expressed a positive preference indication regarding the first potential match at least by determining that the first user performed a first swiping gesture associated with the graphical representation of the first potential match on the graphical user interface;

in response to the determination that the first user expressed the positive preference indication regarding the first potential match, automatically cause the graphical user interface to display a graphical representation of a second potential match of the set of potential matches instead of the graphical representation of the first potential match;

determine that the second user has expressed a positive preference indication regarding the first user after determining that the first user expressed the positive preference indication regarding the first potential match;

determine to enable initial communication between the first user and the second user in response to the determination that both the first user has expressed the positive preference indication regarding the second user and the second user has expressed the positive preference indication regarding the first user;

in response to the determination to enable initial communication between the first user and the second user, cause the graphical user interface to display to the first user the graphical representation of the first potential match; determine that the first user expressed a negative preference indication regarding a third potential match of the set of potential matches at least by determining that the first user performed a second swiping gesture associated with a graphical representation of the third potential match on the graphical user interface, the second swiping gesture different than the first swiping gesture, the third potential match corresponding to a third user;

prevent communication between the first user and the third user after determining that both the first user has expressed the negative preference indication regarding the second user and the second user;

determine that the first user expressed a positive preference indication regarding a fourth potential match of the set of potential matches at least by determining that the first user performed the first swiping gesture associated with a graphical representation of the fourth potential match on the graphical user interface, the fourth potential match corresponding to a fourth user; and

prevent communication between the first user and the fourth user after

determining that the fourth user has expressed a negative preference indication regarding the first user.

74. Claim 7 of the '811 Patent claims:

A system for profile matching, comprising:

an interface operable to:

electronically receive a plurality of user online-dating profiles, each profile comprising traits of a respective user associated with a social networking platform;

electronically receive a first request for matching, the first request electronically submitted by a first user using a first electronic device; and a processor coupled to the interface and operable to:

determine a set of potential matches from the plurality of user online-dating profiles for the first user in response to receiving the first request;

cause the interface to display a graphical representation of a first potential match of the set of potential matches to the first user on a graphical user interface of the first electronic device, the first potential match corresponding to a second user;

determine that the interface has received a positive preference indication from the first user regarding the first potential match at least by determining that the first user performed a first swiping gesture associated with the graphical representation of the first potential match on the graphical user interface;

automatically cause the interface to remove the presentation of the first potential match from the graphical user interface in response to detecting the gesture and cause the interface to present, on the graphical user interface, a second potential match of the set of potential matches to the first user;

determine that the second user has expressed a positive preference indication regarding the first user after determining that the first user expressed the positive preference indication regarding the first potential match; and

determine to enable initial communication between the first user and the second user in response to the determination that both the first user has expressed the positive preference indication regarding the second user and the second user has expressed the positive

preference indication regarding the first user;

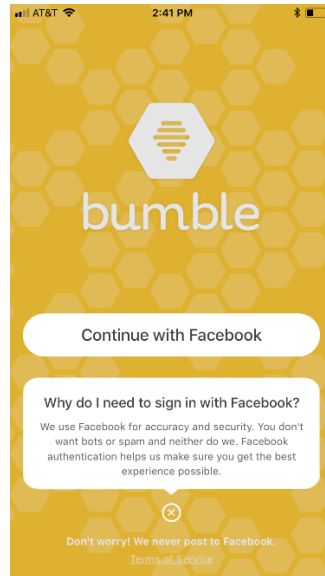
in response to the determination to enable initial communication between the first user and the second user, cause the graphical user interface to display to the first user both the graphical representation of the first potential match;

determine that the first user expressed a negative preference indication regarding a third potential match of the set of potential matches at least by determining that the first user performed a second swiping gesture associated with a graphical representation of the third potential match on the graphical user interface, the second swiping gesture different than the first swiping gesture, the third potential match corresponding to a third user;

prevent communication between the first user and the third user after determining that the first user has expressed the negative preference indication regarding the third user;

determine that the first user expressed a positive preference indication regarding a fourth potential match of the set of potential matches at least by determining that the first user performed the first swiping gesture associated with a graphical representation of the fourth potential match on the graphical user interface, the fourth potential match corresponding to a fourth user; and
prevent communication between the first user and the fourth user in response to determining that the fourth user has expressed a negative preference indication regarding the first user.

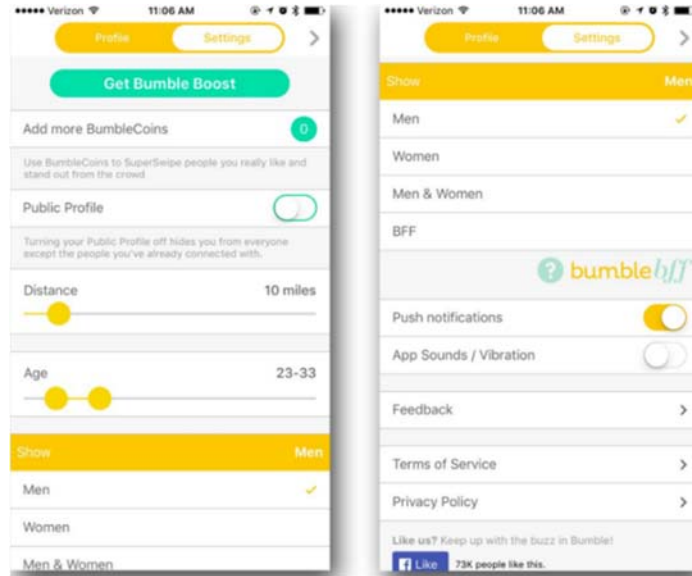
75. Bumble's servers practice all of the limitations of these claims, as set forth in the example below. For example, Bumble's servers electronically receive a plurality of user online-dating profiles, each profile comprising traits of a respective user and associated with a social networking platform. When a Bumble app user downloads and initially accesses the application, the user device is required to set up a Bumble account that is associated with the user's Facebook account:



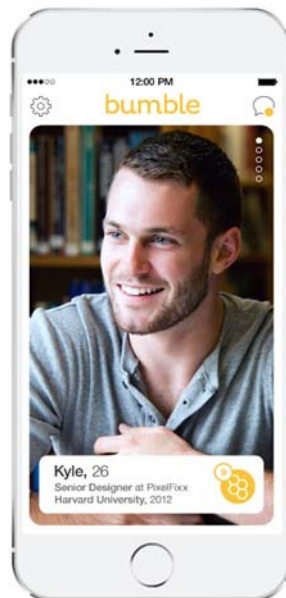
76. Through the account setup process, Bumble receives from each user an online profile comprising traits of respective users. For example, the Frequently Asked Questions on Bumble's website indicates that Bumble "use[s] Facebook to help build your profile by importing your name, age, school, and/or occupation."

77. Bumble's servers also perform the step of electronically receiving a first request for matching, the first request electronically submitted by a first user using a first electronic device. For example, after authorizing his or her Facebook account, the Bumble user is taken to the screen where he or she can indicate positive and negative preferences for various potential matches. At a point before those potential matches are shown, Bumble has received a request for matching.

78. Bumble's servers also perform the step determining a set of potential matches from the plurality of user online-dating profiles for the first user in response to receiving the first request. In response to receiving the parameters set forth in the request for matching contained in the Bumble app user request, Bumble determines a set of potential matches for the requesting user based on parameters such as location, age, and gender:



79. Bumble's servers also perform the step of causing the display of a graphical representation of a first potential match of the set of potential matches to the first user on a graphical user interface of the first electronic device, the first potential match corresponding to a second user. Bumble causes the display of potential matches of other Bumble app users to appear on the first Bumble app user's graphical user interface. The potential matches shown correspond with the determination of potential matches described in ¶ 78 above:



80. Bumble's servers also perform the step of determining that the first user expressed a positive preference indication regarding the first potential match at least by determining that the first user performed a first swiping gesture associated with the graphical representation of the first potential match on the graphic user interface. A Bumble app user may affirmatively select (or reject) another Bumble app user by swiping gestures. Bumble makes a determination based on this Bumble app user indication (e.g., swipe right or swipe left). Bumble determines whether a first Bumble app user has made a positive preference indication in the form of a first swiping gesture:



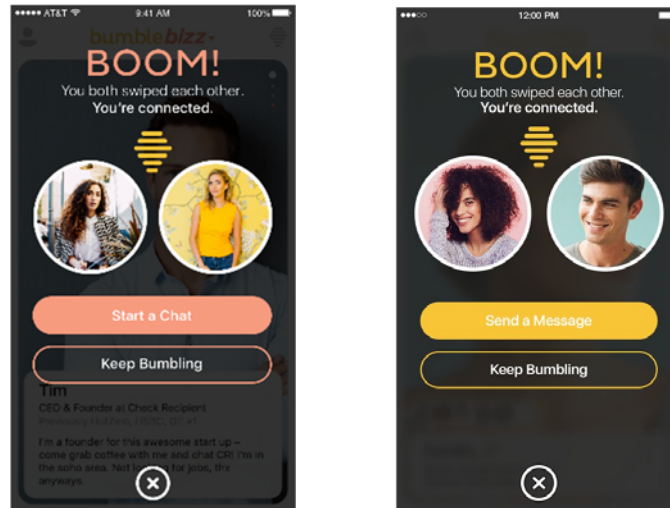
81. Bumble's servers also perform the step of in response to determining that the first user expressed the positive preference indication regarding the first potential match, automatically causing the graphical user interface to display a graphical representation of a second potential match of the set of potential matches instead of the graphical representation of the first potential match. After determining that the first Bumble app user has expressed a positive preference via a swiping gesture (swipe right), Bumble automatically presents a second potential match:



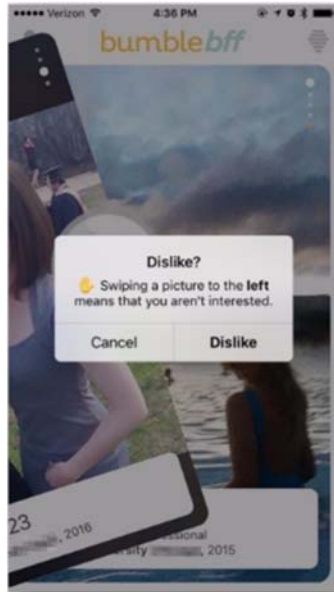
82. Bumble's servers also perform the step of determining that the second user has expressed a positive preference indication regarding the first user after determining that the first user expressed the positive preference indication regarding the first potential match. Bumble compares the selected preference of each potential match (i.e., of a first Bumble app user and a second Bumble app user), including making a determination whether the first Bumble app user and the second Bumble app user each expressed a positive preference for each other.

83. Bumble's servers also perform the step of determining to enable initial communication between the first user and the second user in response to determining that both the first user has expressed the positive preference indication regarding the second user and the second user has expressed the positive preference indication regarding the first user. In the event that the determination described in the immediately preceding paragraph results in a mutual positive preference indication, Bumble determines to enable initial communication between the first Bumble app user and the second Bumble app user. In the same-gender case, either participant may communicate. In an opposite-gender case, Bumble makes the determination to enable initial communication by allowing the female user to message the male user.

84. Bumble's servers also perform the step of in response to determining to enable initial communication between the first user and the second user, causing the graphical user interface to display to the first user the graphical representation of the first potential match. For example, upon determining that mutual positive preference gestures have been made, Bumble presents the following graphical representation of the first potential match:



85. Bumble's servers also perform the step of determining that the first user expressed a negative preference indication regarding a third potential match of the set of potential matches at least by determining that the first user performed a second swiping gesture associated with a graphical representation of the third potential match on the graphical user interface, the second swiping gesture different than the first swiping gesture, the third potential match corresponding to a third user. Bumble determines whether the first Bumble app user expressed a negative preference for a third Bumble app user by determining whether the first Bumble app user swiped left:



86. Bumble's servers also perform the step of preventing communication between the first user and the third user after determining that the first user has expressed the negative preference indication regarding the third user. For example, if the first Bumble app user expressed a negative preference for a third Bumble app user, the Bumble app will not allow the first and third Bumble app users to communicate through the app.

87. Bumble's servers also perform the step of determining that the first user expressed a positive preference indication regarding a fourth potential set of matches at least by determining that the first user performed the first swiping gesture associated with a graphical representation of the fourth potential match on the graphical user interface, the fourth potential match corresponding to a fourth user. A Bumble user may affirmatively select (or reject) another Bumble app user by swiping gestures. Bumble makes a determination based on this Bumble user indication (i.e., swipe right or swipe left). Bumble determines whether a first Bumble app user has made a positive preference indication in the form of a first swiping gesture.

88. Finally, Bumble's servers perform the step of preventing communication between the first user and the fourth user after determining that the fourth user has expressed a negative

preference indication regarding the first user. Upon a determination that a fourth Bumble app user expressed a negative preference for a first Bumble app user, Bumble will prevent communication between those users.

89. At least some servers perform this method in the United States.

90. Bumble also indirectly infringes the '811 patent by inducing infringement by others, such as end-user customers, by, for example, encouraging and instructing end-user customers to install and use the Bumble app in the United States.

91. Bumble took the above actions intending to cause infringing acts by others.

92. Bumble was also aware of the '811 patent. For example, on a February 7, 2018 earnings call, Match Group CEO Mandy Ginsberg discussed the '811 Patent.

93. That same day, an online publication Axios indicated that it had reached out to Bumble for a comment about the '811 Patent.

94. Additionally, it was well-publicized that Tinder was seeking a patent related to its swipe functionality. For example, a June 22, 2015 article in Adweek indicated that Tinder was prosecuting a patent related to swipe functionality.

95. Moreover, Whitney Wolfe-Herd, Chris Gulczynski, and Sarah Mick were all still at Tinder when the application maturing into the '811 Patent was filed in October 2013.

96. If Bumble did not know that the actions it encouraged constituted infringement of the '811 Patent, Bumble nevertheless subjectively believed there was a high probability that others would infringe the '811 patent but took deliberate steps to avoid confirming that it was actively inducing infringement by others.

97. Bumble also indirectly infringes the '811 patent by contributing to infringement by others, such as end-users, by providing within the United States software components for

operating Bumble's app and interacting with the servers associated with Bumble's app. These software components are, for example, the Bumble app, and the download package that contains the Bumble app for interacting with Bumble's servers. Bumble's end-user directly infringed the '811 Patent by, for example, installing and using the Bumble app in the United States to use the Bumble system in the United States and Bumble servers in the United States. These software components are known by Bumble to be especially made or adapted for use in Bumble's infringing system.

98. Bumble has known these components to be especially made or especially adapted for use in infringement of the '811 patent and that these components are not a staple article or commodity of commerce suitable for substantial non-infringing use. Alternatively, Bumble subjectively believed there was a high probability that these components were especially made or especially adapted for use in an infringement of the '811 Patent and that these components are not a staple article or commodity of commerce suitable for substantial non-infringing use but took deliberate steps to avoid confirming the same.

99. Bumble's infringement of the '811 Patent is and has been willful. Bumble at a minimum knew or had reason to know of certain facts which would lead a reasonable person to realize their actions were unreasonably risky with respect to infringement of the '811 Patent. For example, as discussed above, Bumble is and has been aware of the '811 Patent. To Match's knowledge, Bumble has not attempted to avoid infringement of the patent or to design around it. Bumble designed its app to mirror Tinder and its swipe functionality specifically to compete with Tinder and avoid a barrier to entry in the market by mimicking Tinder's swipe functionality in connection with an online matchmaking app.

100. The inventions claimed in the '811 patent are not directed to an abstract idea. Instead, the claims are directed to an improvement in computer and user interface functionality as well as in online social networking.

101. Specifically, the inventors of the continuation-in-part aspect of the '811 patent set out to improve the user interface functionality in dating and other matchmaking apps. The swipe on a graphical representation of a user equals positive, different swipe on the photographic representation equals negative, in connection with a mutual opt-in matchmaking app, was a non-conventional, concrete improvement in how touch screen user interfaces interact with users sifting through and making binary choices, such as indicating positive or negative preferences related to potential matches. To be sure, the general gesture of swiping may have been known in the prior art. But the specific application to a graphical representation of a user in the specific matchmaking context claimed, in order to make binary choices expressing a preference or lack thereof regarding potential matches, was unknown and unconventional.

102. This interface improvement allows users to sift through more information, more quickly than previous interfaces addressing similar binary choice user decisions. These efficiencies to user interaction revolutionized the world of online dating.

103. That the inventions are directed toward new computer-specific user interface technology is confirmed by the surrounding limitations. The inventions claim a specific computer method, system, and computer-readable medium of matchmaking where parties are not permitted to communicate until a match is made, user profiles are specifically "online-dating profiles" and those profiles must be "associated with a social networking platform," a type of platform that is itself computer specific. The claims further describe various actions of a graphical user interface that provide certain information at certain times in response to certain

types of inputs. This is not conventional post-solution activity in order to monopolize an abstract idea of matchmaking or even mutual opt-in matchmaking. Instead, these limitations recite a particularly advantageous computer embodiment of a matchmaking process that also solves computer-specific problems related to the ease of making fake accounts and profiles, the inconvenience of filling out profiles, and the problem of certain online dating users being inundated with messages. This particularly advantageous online matchmaking method may have been known prior to the inventions claimed. However, this method was not so pervasive as to be “conventional.”

104. Moreover, even if that matchmaking method was conventional, the inventions are directed to an improved interface for that method.

SECOND CAUSE OF ACTION: DESIGN PATENT INFRINGEMENT

105. Match incorporates by reference the preceding paragraphs as if fully set forth herein.

106. Bumble’s app also infringes Match’s Design Patent, D798,314.

107. U.S. Patent D798,314 claims an ornamental aspect of Tinder’s app design related to swiping left or right on cards containing photographs.

108. The ’314 Patent claims the ornamental design shown in Figures 1 and 2 of that patent:

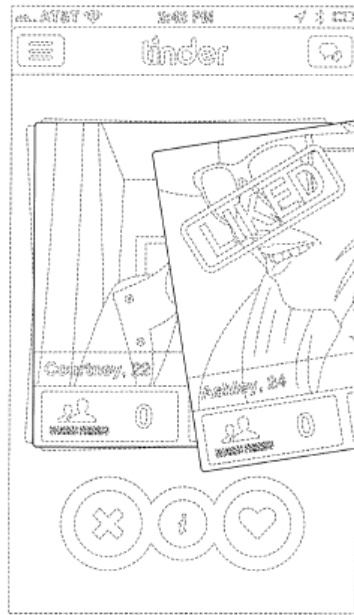


FIG. 1

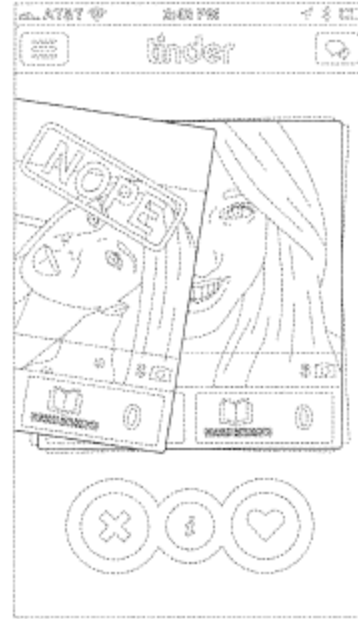
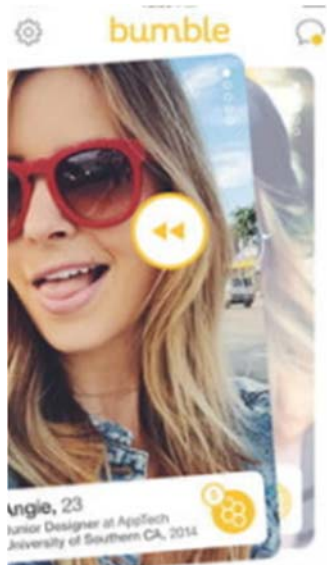


FIG. 2

109. As the patent makes clear, only the solid lines illustrate the ornamental design claimed. The broken lines are for illustrative purposes only.

110. As discussed above, Bumble looks “virtually identical” to Tinder and infringes on this ornamental design.

111. Specifically, Bumble’s app includes an ornamental design where photographic cards are swiped left or right, as shown below:



112. The resemblance between the two apps is such as to deceive an ordinary observer to believing that Bumble's design is the same as Match's patented design.

113. Bumble has actual notice of the '314 Patent. Chris Gulczynski, a co-founder of Bumble and Bumble's former Chief Product Officer, is a named inventor on the patent from his time at Tinder. Gulczynski previously assigned his rights to the patent (and all other relevant to intellectual property) to Match.

114. Bumble's infringement of the '314 Patent is and has been willful. Bumble at a minimum knew or had reason to know of certain facts which would lead a reasonable person to realize their actions were unreasonably risky with respect to infringement of the '314 Patent. Specifically, Bumble, at least because of its relationship with Chris Gulczynski, who designed aspects of the user interfaces of both Tinder and Bumble, knew that the ornamental design claimed in the '314 Patent was likely infringed by Bumble's substantially identical card swipe ornamental design in the Bumble app.

THIRD CAUSE OF ACTION: TRADEMARK INFRINGEMENT
UNDER 15 U.S.C. § 1114(a)

115. Match incorporates by reference the preceding paragraphs as if fully set forth herein.

116. Match has received a federal registration for the mark "swipe" in connection with computer application software for mobile devices—software for social introduction and dating services.

117. Match, through Tinder, first used the mark "swipe" in commerce on or around March 28, 2013 and continues to do so.

118. Bumble, by using Match's "swipe" mark to compete with Tinder in the market for software for social introduction and dating services," violated 15 U.S.C. § 1114. As discussed above, Bumble is prominently using Match's "swipe" mark throughout its app and promotional

activities. Bumble's activities are causing, and unless enjoined, will continue to cause a likelihood of confusion and deception of members of the public, and, additionally, injury to Match and Tinder's reputation and goodwill as reflected in the "swipe" mark. Bumble's use of the swipe mark will also actually deceive the public or is at least likely to deceive the public regarding the source, sponsorship, and/or affiliation of Bumble's app.

119. These actions have also materially damaged the value of Match's registered "swipe" mark.

120. As a proximate result of Bumble's actions, Match has suffered damages, including, but not limited to, lost revenue and loss of goodwill associated with its Tinder app.

121. At least because of the prior affiliation of Bumble officers with Tinder and because of Bumble's competition with Tinder, Bumble's actions also demonstrate an intentional, willful, and malicious intent to trade on goodwill associated with Match and Tinder's "swipe" mark.

FOURTH CAUSE OF ACTION: TRADEMARK INFRINGEMENT
UNDER 15 U.S.C. § 1125(a)

122. Match incorporates by reference the preceding paragraphs as if fully set forth herein.

123. Match is the owner of word marks "swipe left" and "swipe right" in connection with internet-based dating and matchmaking and similar services since at least on around March 28, 2013. Match has used and continues to use these marks throughout the United States.

124. These marks are valid and enforceable and in full force and effort.

125. As described above, Bumble uses Match's "swipe left" and "swipe right" marks prominently. Bumble's doing so is likely to cause confusion or mistake or deceive the public as to the origin, sponsorship, or approval of the Bumble app.

126. At least because of the prior affiliation of Bumble officers with Tinder and because

of Bumble's competition with Tinder, Bumble's actions also demonstrate an intentional, willful, and malicious intent to trade on goodwill associated with the "swipe right" and "swipe left" word marks.

127. These actions have caused damages to Match, including lost Tinder revenue as well as damages to Tinder's brand and associated goodwill.

FIFTH CAUSE OF ACTION: INFRINGEMENT OF TRADE DRESS
UNDER 15 U.S.C. § 1125(a)

128. Match incorporates by reference the preceding paragraphs as if fully set forth herein.

129. Match is also the owner of legally protectable trade dress. For example, the non-functional, ornamental design claimed in the '314 Patent is a design that is either inherently distinctive or has acquired secondary meaning designating Match and Tinder as the source of the product.

130. As described above, this card-based swipe interface has been described as "famous" or "iconic" by multiple third-party publications.

131. This interface was first used in commerce some time before September 1, 2012.

132. By including this same non-functional ornamental design, Bumble's app is likely to cause confusion or mistake or deceive the public as to the origin, sponsorship, or approval of the Bumble app.

133. Match is also the owner of trade dress related to Tinder's "It's a Match!" screen, shown here:



134. The Tinder app has included this same or similar design since it was initially released.

135. The “It’s a Match Screen!” was first used in commerce on August 2, 2012.

136. As described above, Tinder uses this screen in various advertising materials, including on the App Store, Google Play Store, and on YouTube.

137. This overall design is non-functional.

138. By including this same non-functional design, Bumble’s app is likely to cause confusion or mistake or deceive the public as to the origin, sponsorship, or approval of the Bumble app.

139. As also discussed above, Bumble’s similar screen is virtually identical to Tinder’s.

140. By including this same non-functional design, Bumble’s app is likely to cause confusion or mistake or deceive the public as to the origin, sponsorship, or approval of the Bumble app.

141. At least because of the prior affiliation of Bumble officers with Tinder and

because of Bumble's competition with Tinder, Bumble's actions also demonstrate an intentional, willful, and malicious intent to trade on goodwill associated with Match's trade dress.

142. These actions have caused damages to Match in the form of lost Tinder revenue as well as damages to Tinder's brand and associated goodwill.

SIXTH CAUSE OF ACTION: TRADEMARK DILUTION

143. Match incorporates by reference the preceding paragraphs as if fully set forth herein.

144. Certain of Bumble's actions also constitute trade mark and trade dress dilution by blurring under 15 U.S.C. § 1125(c).

145. Match's wordmark "swipe right" is famous to the general public.

146. As discussed above, the phrase "swipe right" is included in the Oxford English Dictionary, specifically associated with the Tinder app.

147. "Swipe right," especially in the connection with "swipe left," is often described by third parties as a famous "cultural phenomenon."

148. These third parties describe the cultural phenomenon specifically in reference to Tinder and the Tinder app.

149. In light of Tinder's own extensive marketing as well as the descriptions of third-parties, "swipe right" has become effectively a "household name" identifying the Tinder brand and Tinder app.

150. After Tinder's "swipe right" mark became famous, Bumble began using "swipe right" in connection with its app. Bumble's routine use of the mark "swipe right" in connection with a direct competitor mobile dating service has caused and is likely to cause dilution by blurring, diluting the distinctiveness of "swipe right" as a brand signifier for Tinder and/or Match.

151. These actions have harmed the reputation of goodwill associated with Tinder.

152. Bumble's dilution of Tinder's "swipe right" mark has been done willfully and intentionally.

SEVENTH CAUSE OF ACTION: TEXAS UNFAIR COMPETITION.

153. Match incorporates by reference the preceding paragraphs as if fully set forth herein.

154. As discussed above, Match's trademarks and trade dress are valid marks in full force and effect.

155. Bumble knowingly and willfully used these marks and this trade dress in commerce through the promotion of its app and in the app itself.

156. Bumble's actions are likely to cause consumer confusion, cause consumer mistake, and/or deceive ordinarily prudent consumers as to the affiliation, connection, association, sponsorship, or approval of Match and/or Tinder products because Bumble's actions suggest that its own app originates from, is sponsored by, is authorized by, or is otherwise connected with Tinder and/or Match.

157. These actions have materially damaged the value of Match's Tinder marks and trade dress.

158. As a result, Match has suffered damages, including lost Tinder revenue and damage to goodwill associated with Tinder.

159. Bumble's actions have caused injury to Match, and Match is entitled to damages caused thereby, including punitive damages as a result of Bumble's malicious and willful actions.

**EIGHTH CAUSE OF ACTION: MISAPPROPRIATION OF TRADE SECRETS UNDER
THE DEFEND TRADE SECRETS ACT AND THE TEXAS UNIFORM TRADE
SECRETS ACT**

160. Match incorporates by reference the preceding paragraphs as if fully set forth herein.

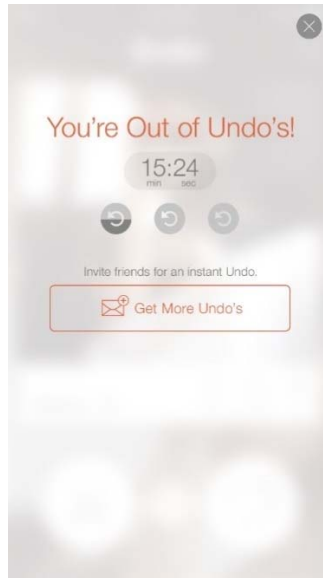
161. In connection with their employment at Hatch Labs/Tinder/Match, at least Chris Gulczynski and Sarah Mick were given access to certain confidential information related to proposed Tinder features.

162. Gulczynski and Mick agreed as part of their employment to keep confidential all confidential information and to not disclose such information to anyone or to use such information for anyone's benefit other than Hatch Labs/Tinder/Match.

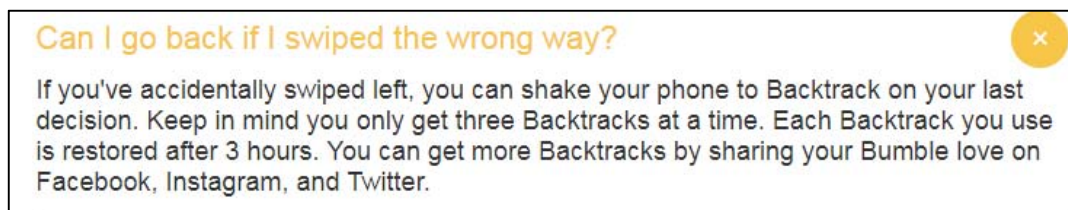
163. While at Tinder, Gulczynski and Mick were involved in development for a potential "undo" function for the Tinder app.

164. The concept of the "undo," as discussed internally at Tinder, involved allowing all users three "undos." Once an "undo" was used, it would take a certain period of time for that "undo" to replenish. If the user did not want to wait that time period for the undo to replenish, the user could speed up the process by promoting that app via social media.

165. For example, the image below reflects an internal Tinder mock-up of the "undo" idea in which Gulczynski and Mick were involved:



166. In March of 2015, Bumble implemented a nearly, if not literally, identical concept in its “Backtrack” feature. In Bumble’s own words on its website:



167. To be sure, Tinder had previously announced its “rewind” functionality before Bumble released its rewind feature. But Tinder’s “rewind” feature was different and remains different from this confidential concept misappropriated from Gulczynski and Mick’s time at Tinder.

168. Tinder’s rewind allows for “Tinder Plus” users to “rewind” errant left swipes in connection with a paid subscription.

169. Bumble’s backtrack feature, in contrast, plainly mirrors the three “undos” that replenish over time and/or with promoting the app on social media outlets.

170. At least because of their confidentiality agreements, Gulczynski and/or Mick knew or had reason to know at the time they began using these concepts that they were acquired

by improper means or under circumstances giving rise to a duty to maintain the secrecy of or limit the use of the secret.

171. Additionally, because Gulczynski and Mick were co-founders and executives at Bumble, Bumble used this trade secret knowing or with reason to know that the secret was acquired by improper means, acquired under circumstances giving rise to a duty to maintain the secrecy of the trade secret, or was derived from a person (Gulczynski and/or Mick) who owed a duty to Match and Tinder to maintain the secrecy of the idea.

172. Bumble's app, which uses this trade secret, is used in interstate commerce.

173. In light of the totality of the circumstances between Match/Tinder and Bumble, this misappropriation was willful and malicious misappropriation, made with conscious disregard of the rights of Match and Tinder in the trade secret.

174. Indeed, Bumble's misappropriation related to "backtrack" appears to reflect a pattern of disregard for Match's trade secret rights.

175. While Gulczynski and Mick were still at Tinder, Sean Rad came up with an idea to implement picture messaging within the Tinder app.

176. Although dating apps had been reluctant to include a direct picture messaging function because of concerns related to unsolicited lewd photographs, Rad conceived the idea of allowing direct photograph messaging but sending only a deliberately blurred photo that the photo recipient would be required to click before viewing an unblurred image. In this way, anyone looking over your shoulder could not see the message unless the recipient clicked it. Further, the user recipient could, based on context, determine whether the sent picture was one the recipient was comfortable viewing in public (or ever).

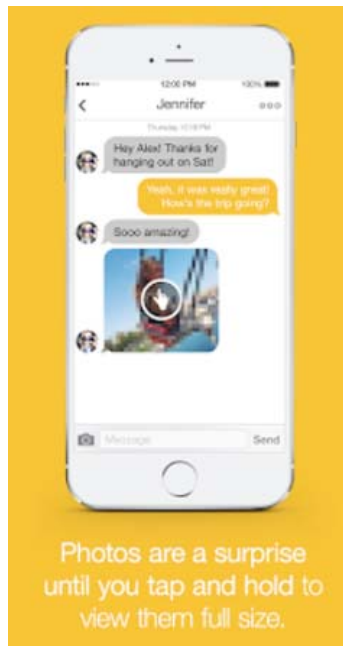
177. After Rad conceived of the idea, he asked Gulczynski to perform a mock-up of

the concept. Below is a PDF screenshot of Gulczynski's design mock-up at Tinder:



178. The two icons with the hands over them would, once clicked, display the full photo.

179. In February 2015, after Gulczynski and Mick left Tinder to work at Bumble, Bumble implemented the identical concept, complete with same white hand surrounded by a white circle over the blurred image:



Photos are a surprise
until you tap and hold to
view them full size.

180. When Bumble released the feature, Bumble indicated that it was implementing a “Snapchat-like” feature, implying that Bumble was co-opting a feature from Snapchat.

181. The truth is that Gulczynski and/or Mick took the idea from confidential development discussions at Tinder.

182. These co-founders of Bumble that previously worked with Tinder have inappropriately used confidential information related to Bumble’s backtrack function.

183. It is currently unknown and unknowable to Match whether Bumble is using any algorithms or source code acquired at Tinder from Gulczynski, Mick, and/or Wolfe-Herd’s time at Tinder. It is also unknown and unknowable to Match whether Bumble acquired or is using other confidential information acquired from Gulczynski, Mick, and/or Wolfe-Herd’s time at Tinder.

184. Bumble’s use of the backtrack/undo trade secret constitutes a misappropriation of trade secrets in violation of the Defend Trade Secrets Act and the Texas Uniform Trade Secrets Act.

185. Bumble’s misappropriation of the “undo” trade secret has caused damage to Match. It has been forced to compete for users and revenue against a competitor implementing Match’s own confidential idea, developed at Match, for Match, by personnel being paid by Match.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff prays for the entry of a judgment from this Court:

1. Judgment in Plaintiffs’ favor and against Defendant on all causes of action alleged herein;

2. A preliminary and/or permanent injunction restraining Defendant, and its agents, servants, employees, attorneys, successors and assigns, and all persons, firms, and corporations acting in concert with them, from directly or indirectly violating Match's utility patent rights, design patent rights, rights under the Lanham Act, rights arising from common law unfair competition, and from any further misappropriation or unauthorized use of Match/Tinder's trade secrets.

3. For damages in an amount to be further proven at trial, including:
- a. Damages assessed against Defendant pursuant to the Defend Trade Secrets Act of 2016, including compensatory damages, unjust enrichment or restitution damages, reasonably royalty, and exemplary damages;
 - b. Damages assessed against Defendant pursuant to the Texas Uniform Trade Secret Act, including compensatory damages, unjust enrichment or restitution damages, reasonably royalty, and exemplary damages;
 - c. Damages assessed against Defendant pursuant to the Lanham Act, including compensatory damages, statutory damages, treble damages, restitution, including disgorgement of profits,
 - d. Damages under 35 U.S.C. § 284, including enhancement and including supplemental damages for any continuing post-verdict infringement up until entry of final judgment, with an accounting, as needed;
 - e. Damages under 35 U.S.C. § 289, including Bumble's total profit and revenue realized and derived from its infringement of U.S. Patent D798,314 and in an amount not less than a reasonable royalty.

- f. Damages for Defendant's common law unfair competition, including punitive damages
 - 4. For Plaintiffs' reasonable attorney's fees;
 - 5. For costs of suit incurred herein, including all disbursements;
 - 6. For pre-judgment and post-judgment interest on the damages awarded;
 - 7. If an injunction is not granted, that Plaintiffs be awarded an ongoing licensing fee;
- and
- 8. For such other and further relief (including any and all equitable relief) as the Court may deem to be just and proper.

DEMAND FOR JURY TRIAL

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, Plaintiffs demand a trial by jury on all issues triable of right by a jury.

DATED: March 16, 2018

Respectfully submitted,

CALDWELL CASSADY & CURRY

Bradley W. Caldwell (*Admission Pending*)

Texas State Bar No. 24040630

Email: bcaldwell@caldwellcc.com

John F. Summers

Texas State Bar No. 24079417

Email: jsommers@caldwellcc.com

Warren J. McCarty, III

Illinois State Bar No. 6313452

Email: wmccarty@caldwellcc.com

CALDWELL CASSADY CURRY P.C.

2101 Cedar Springs Road, Suite 1000

Dallas, Texas 75201

Telephone: (214) 888-4848

Facsimile: (214) 888-4849

/s/ John P. Palmer

John P. Palmer

State Bar. 15430600

Email: palmer@namanhowell.com

Naman, Howell, Smith & Lee, PLLC

400 Austin Avenue, 8th Floor

P.O. Box 1470

Waco, TX 76701

Telephone: (254) 755-4100

Facsimile: (254) 754-6331

ATTORNEYS FOR PLAINTIFF

MATCH GROUP, LLC

Exhibit A

(12) **United States Patent**
Rad et al.

(10) **Patent No.:** **US 9,733,811 B2**
(45) **Date of Patent:** **Aug. 15, 2017**

(54) **MATCHING PROCESS SYSTEM AND METHOD**

(2013.01); **G06Q 10/10** (2013.01); **G06Q 30/02** (2013.01); **G06Q 50/01** (2013.01); **G06Q 50/10** (2013.01)

(71) Applicant: **TINDER, INC.**, West Hollywood, CA (US)

(58) **Field of Classification Search**
CPC G06F 17/30867; G06F 17/3053; G06F 17/30386

(72) Inventors: **Sean Rad**, Los Angeles, CA (US);
Todd M. Carrico, Melissa, TX (US);
Kenneth B. Hoskins, Plano, TX (US);
James C. Stone, Addison, TX (US);
Jonathan Badeen, North Hollywood, CA (US)

See application file for complete search history.

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(73) Assignee: **Tinder, Inc.**, West Hollywood, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 121 days.

(21) Appl. No.: **14/059,192**

(22) Filed: **Oct. 21, 2013**

(65) **Prior Publication Data**

US 2014/0074824 A1 Mar. 13, 2014

Related U.S. Application Data

(63) Continuation-in-part of application No. 12/339,301, filed on Dec. 19, 2008, now Pat. No. 8,566,327.
(Continued)

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(Continued)

Primary Examiner — Yuk Ting Choi

(74) *Attorney, Agent, or Firm* — Baker Botts L.L.P.

(51) **Int. Cl.**

G06F 17/30	(2006.01)
G06F 3/0484	(2013.01)
G06Q 10/10	(2012.01)
G06Q 30/02	(2012.01)
G06Q 50/10	(2012.01)
G06Q 50/00	(2012.01)
G06F 3/0482	(2013.01)
G06F 3/0488	(2013.01)

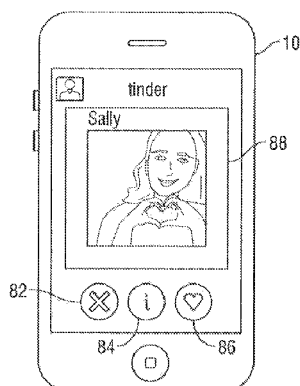
(52) **U.S. Cl.**

CPC **G06F 3/04842** (2013.01); **G06F 3/0482** (2013.01); **G06F 3/0488** (2013.01); **G06F 17/30554** (2013.01); **G06F 17/30657**

(57) **ABSTRACT**

A method for profile matching includes receiving a plurality of user profiles, each user profile comprising traits of a respective user. The method includes receiving a preference indication for a first user profile of the plurality of user profiles. The method also includes determining a potential match user profile of the plurality of user profiles based on the preference indication for the first user profile. The method also includes presenting the potential match user profile to a second user.

9 Claims, 11 Drawing Sheets



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Related U.S. Application Data

- (60) Provisional application No. 61/793,866, filed on Mar. 15, 2013.

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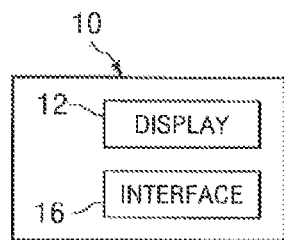
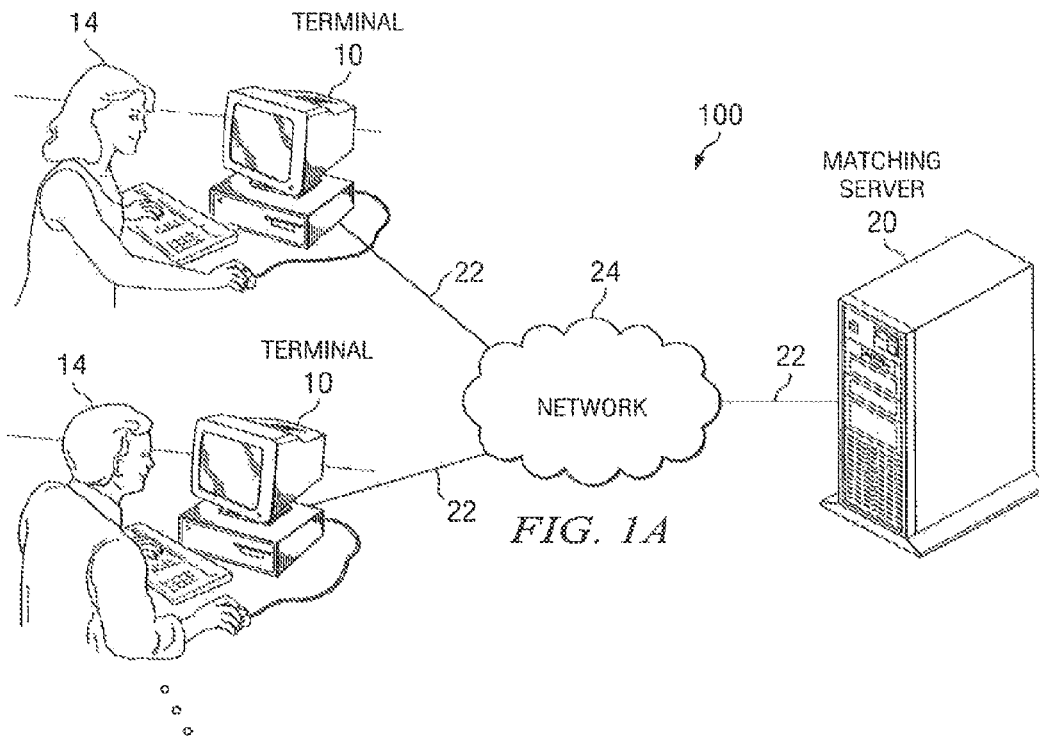


FIG. 1B

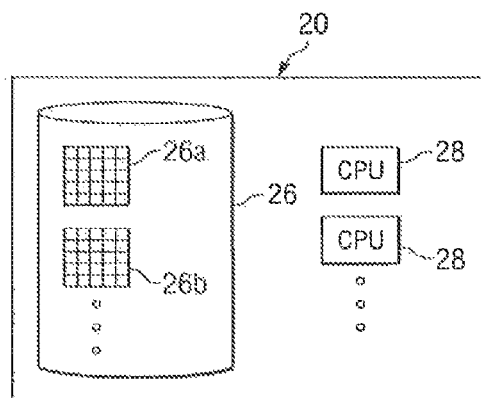


FIG. 1C

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NAME	PROPERTY 1	PROPERTY 2	...
Jane Doe 30a			
Jane Roe 30b			
Jane Boe 30c			
Jane Loe 30d			...
Jane Snoe 30e			
...			
...			
...			

FIG. 1D

SEARCH RESULTS

1. Jane Doe 31a

View 33

Heart 34

2. Jane Roe 31b

View 33

Heart 34

3. Jane Boe 31c


View 33

Heart 34

...

See More

FIG. 1E



Jane Doe

Contact 35

Close 36

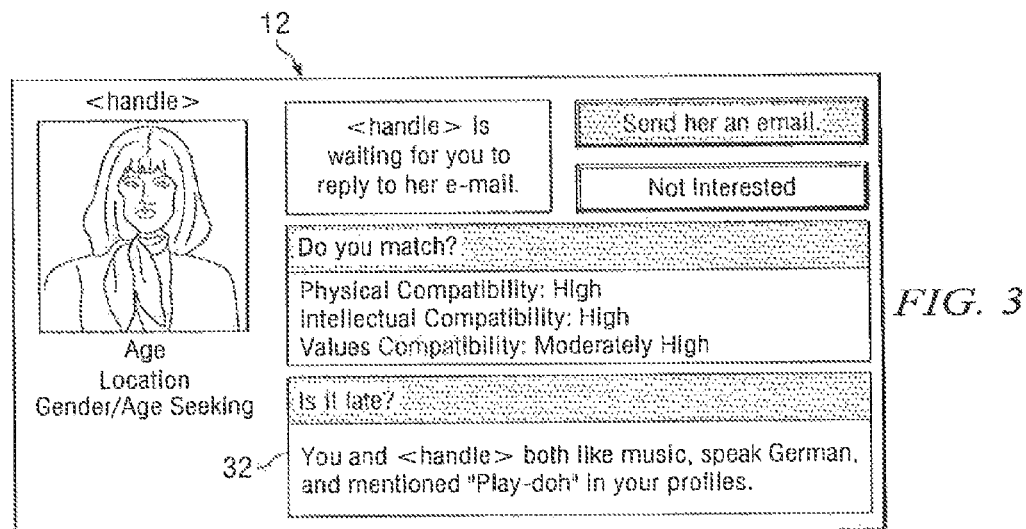
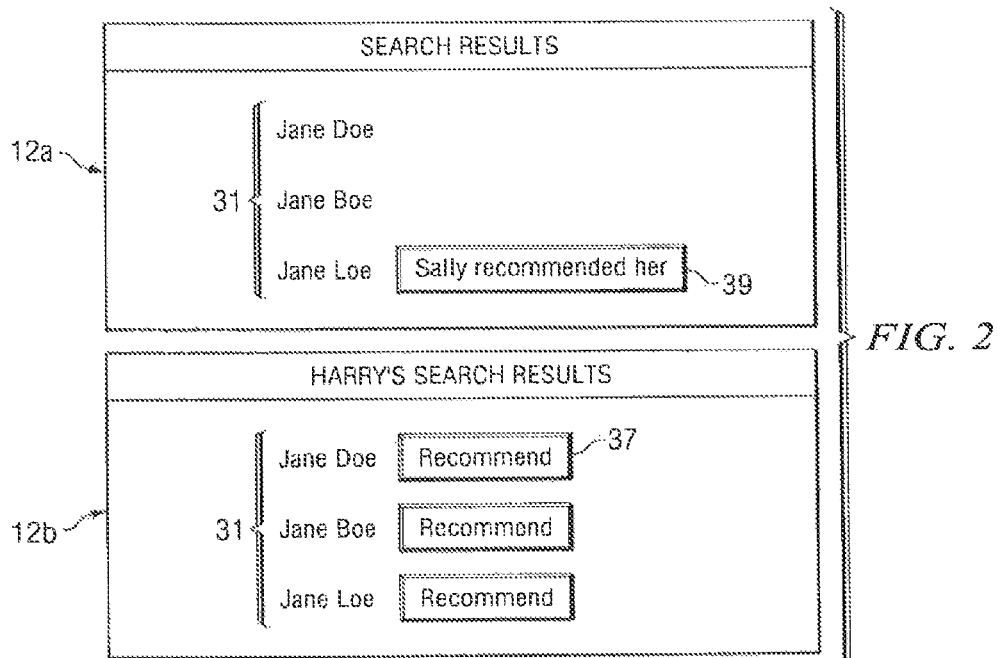
Born: 10/01/75

Hometown: Dallas, TX

Likes: Chocolate, rollerblading

Dislikes: Body odor, arrogance, football

FIG. 1F



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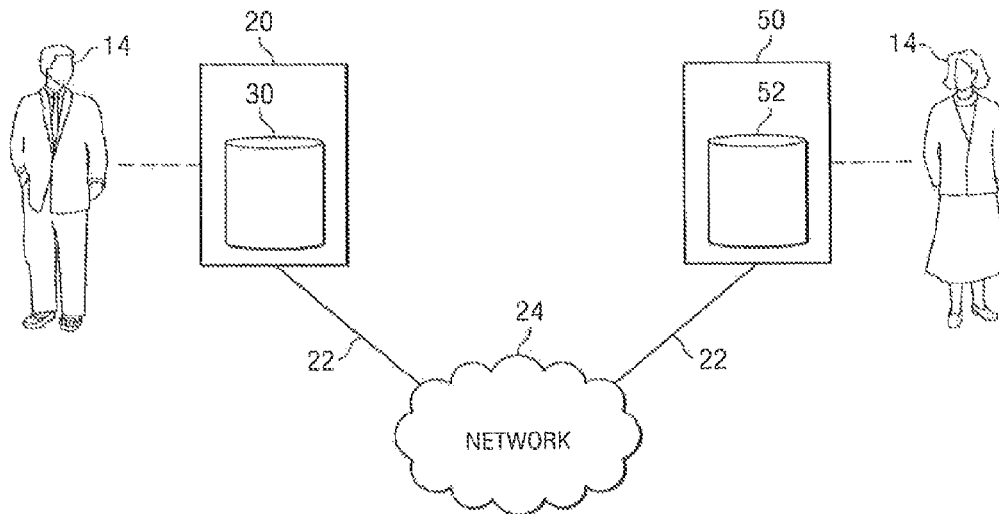


FIG. 4

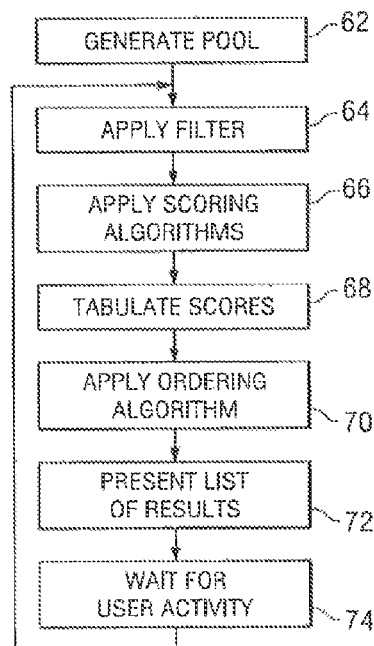


FIG. 5

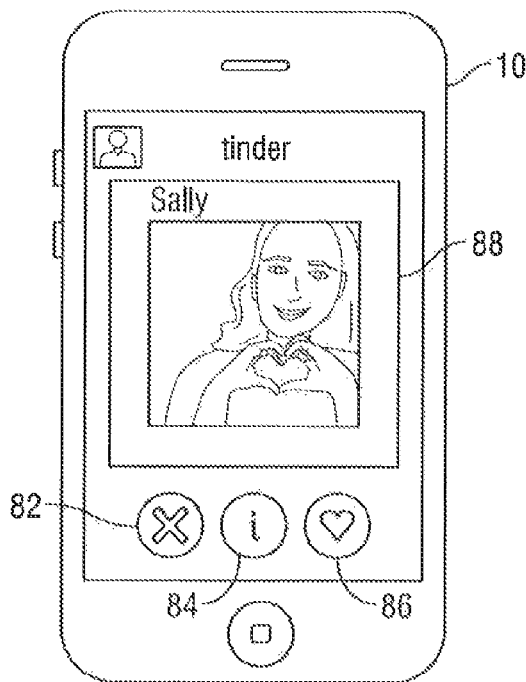


FIG. 6

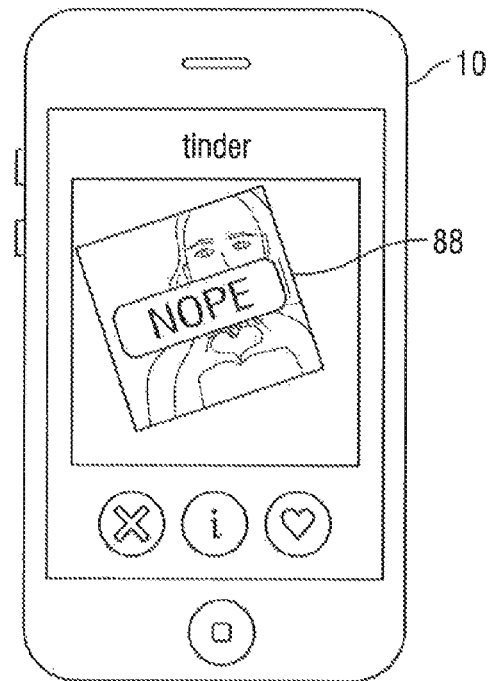


FIG. 7

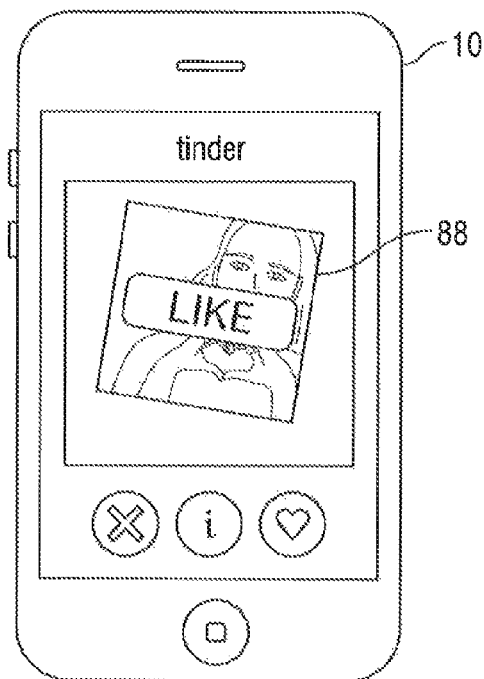


FIG. 8

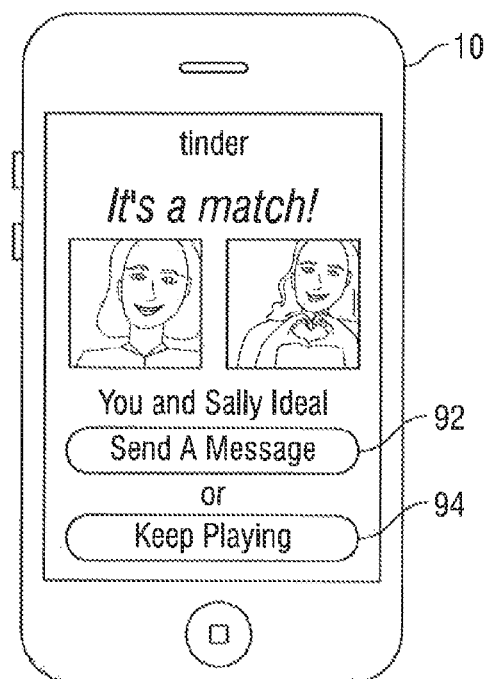


FIG. 9

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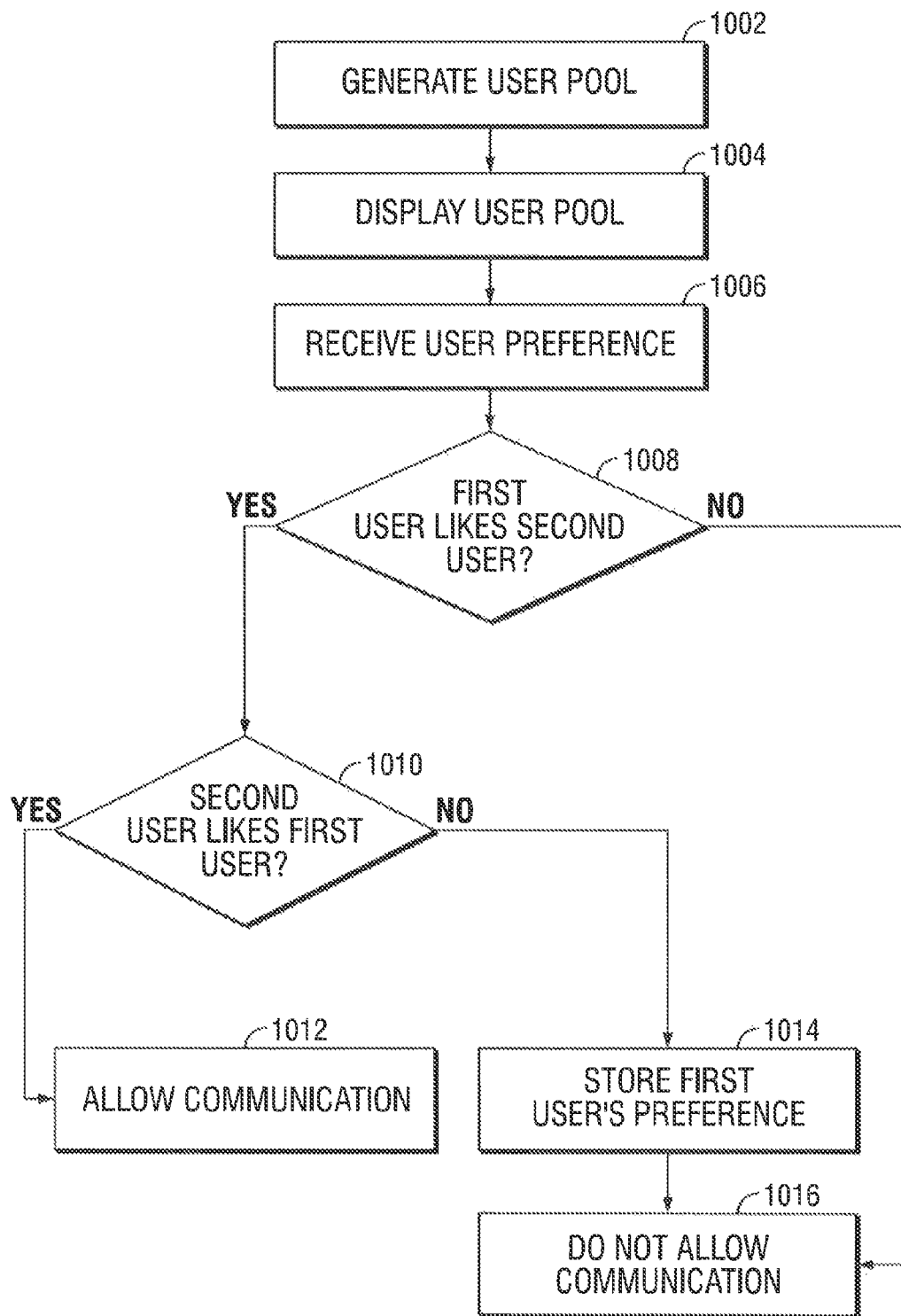


FIG. 10

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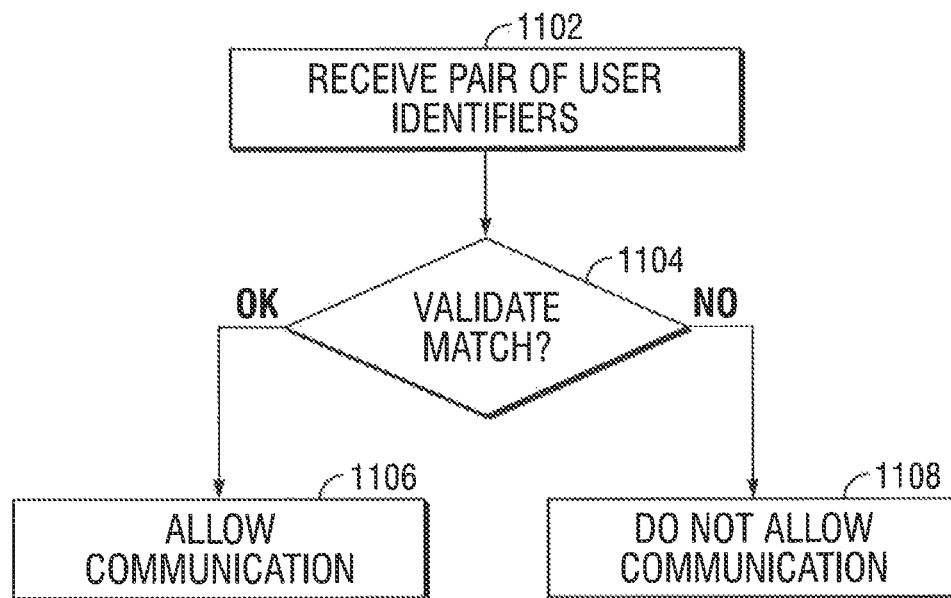


FIG. 11

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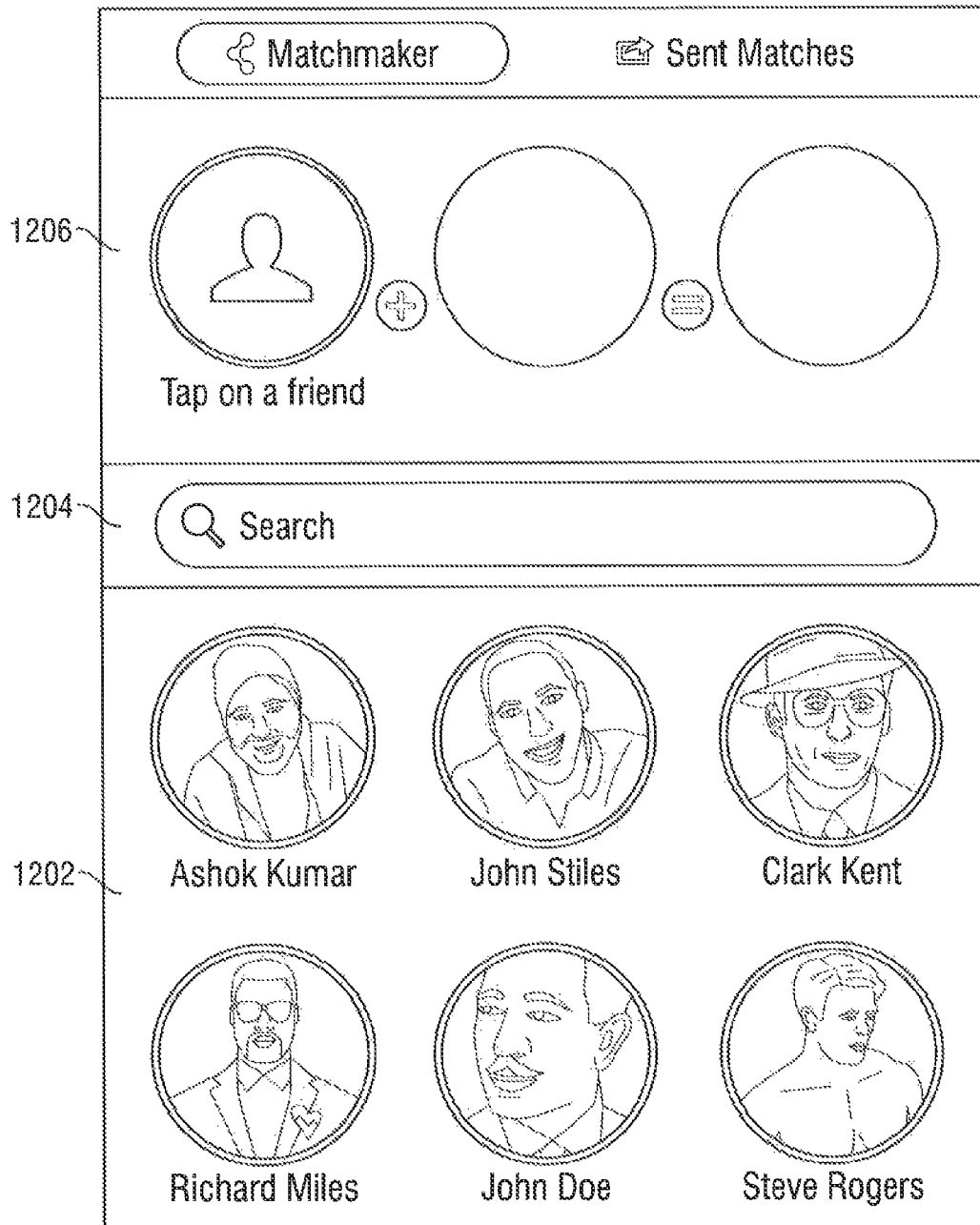


FIG. 12A

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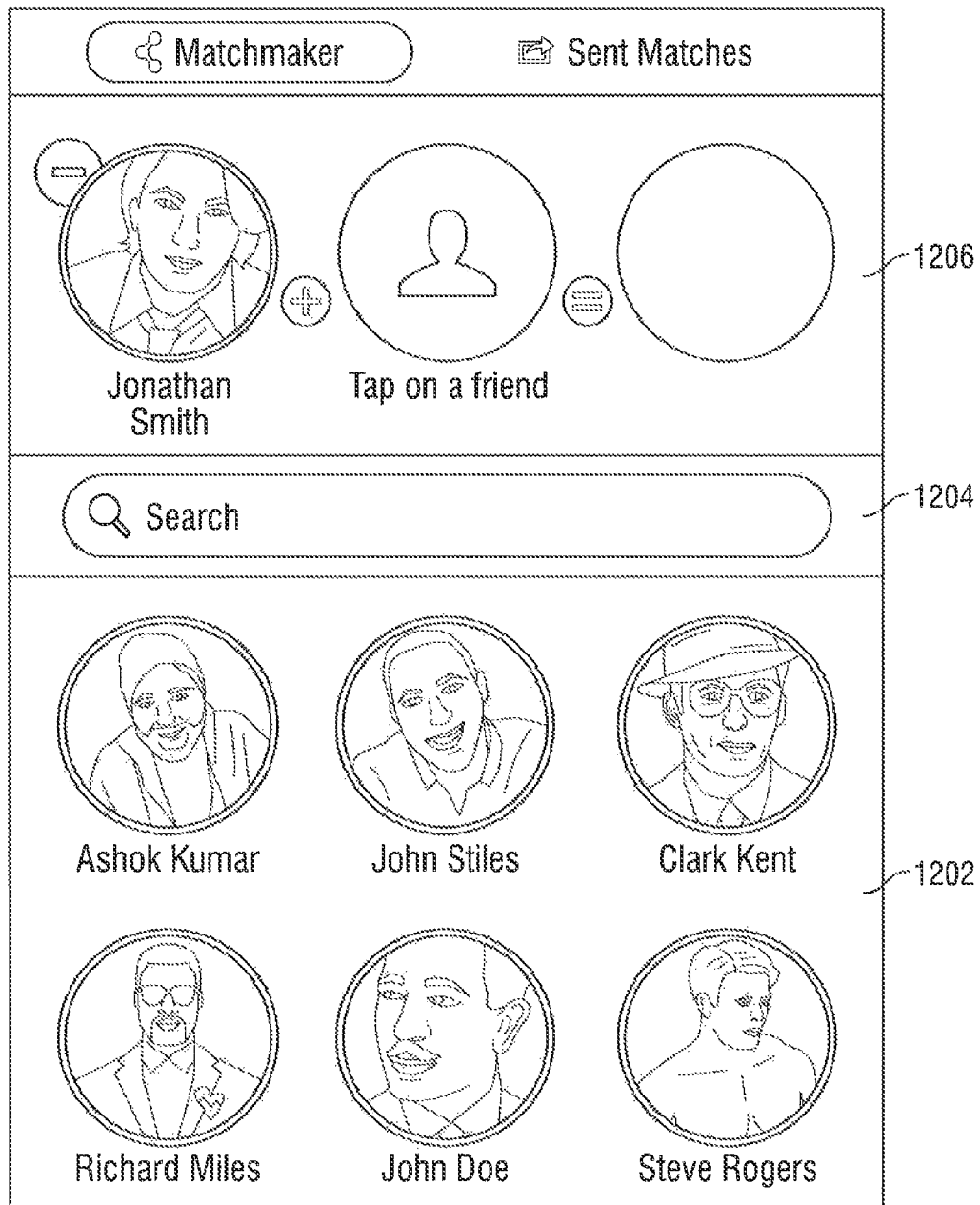


FIG. 12B

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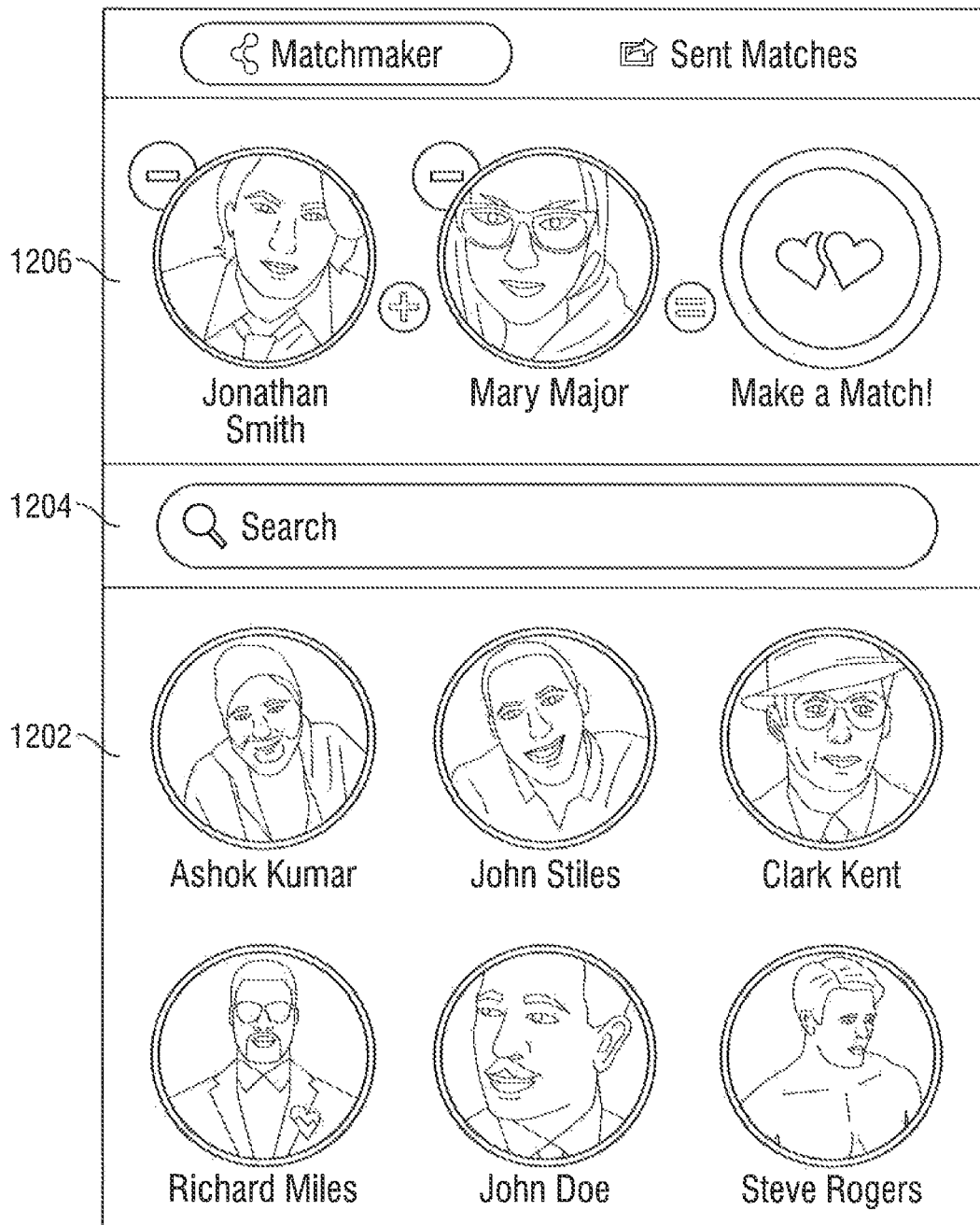


FIG. 12C

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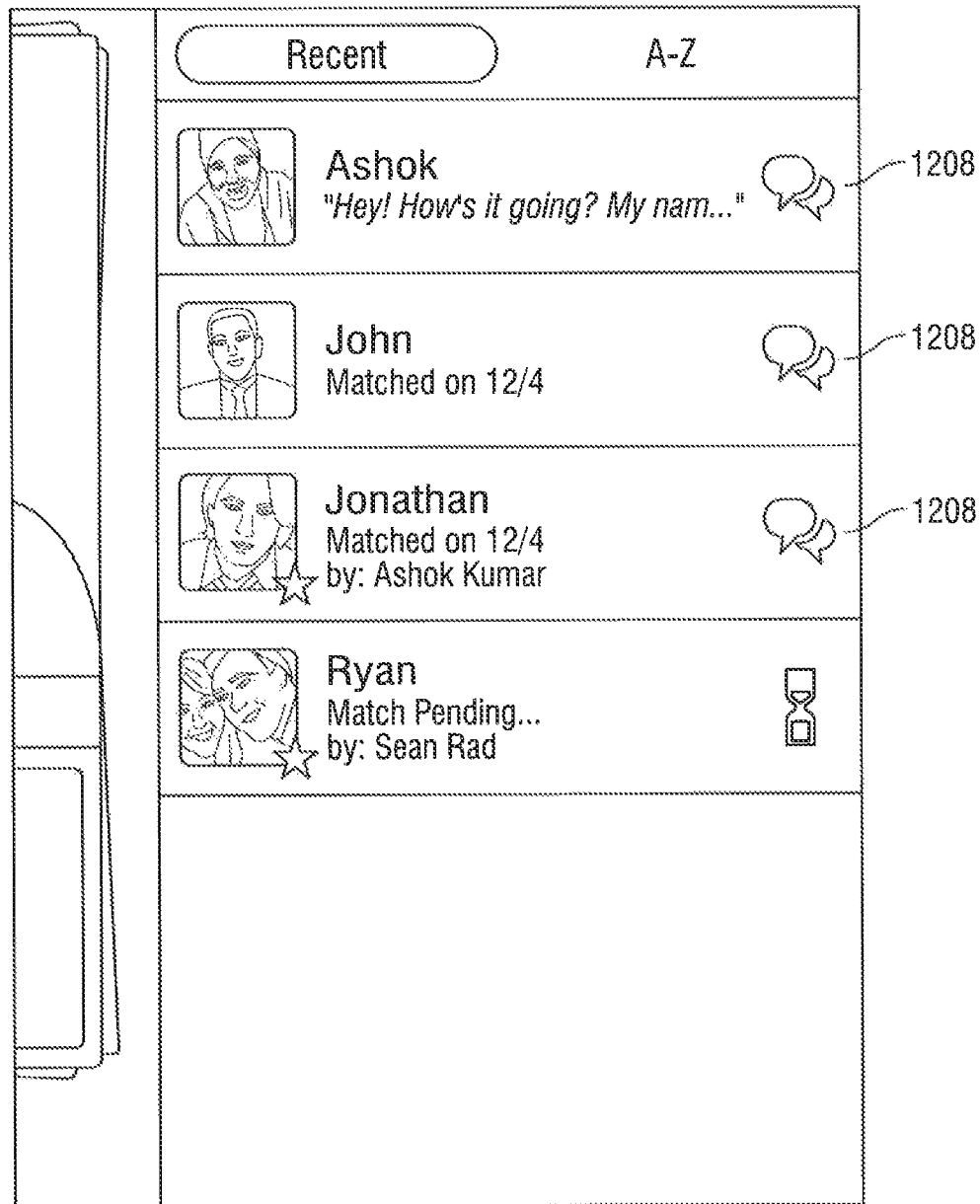


FIG. 12D

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MATCHING PROCESS SYSTEM AND METHOD

RELATED APPLICATION

This application is a continuation-in-part of Ser. No. 12/339,301, entitled "MATCHING PROCESS SYSTEM AND METHOD," filed Dec. 19, 2008.

This application claims benefit under 35 U.S.C. §119(e) to U.S. Provisional Application Ser. No. 61/793,866, entitled "SOCIAL MATCHING SYSTEM AND METHOD," filed Mar. 15, 2013.

TECHNICAL FIELD

This invention relates generally to computer matching systems and more particularly to a matching process system and method.

BACKGROUND

Networking architectures have grown increasingly complex in communications environments. In recent years, a series of protocols and configurations have been developed in order to accommodate a diverse group of end users having various networking needs. Many of these architectures have gained significant notoriety because they can offer the benefits of automation, convenience, management, and enhanced consumer selections.

Certain network protocols may be used in order to allow an end user to conduct an on-line search of candidates to fill a given vacancy. These protocols may relate to job searches, person finding services, real estate searches, or on-line dating. While some believe that on-line dating is simply a matter of matching supply and demand, there is statistical and empirical evidence to suggest that successful on-line dating entails far more.

For example, people having similar and/or compatible character traits and values should be matched together. However, effectively linking two participants together can prove to be a challenging endeavor. Coordinating a relationship between two like-minded individuals can be a significant chore, as there are a number of obstacles and barriers that must be overcome.

One problem that has arisen is that matching services are limited to searching for matches only within their own platform. Thus, only people who have gone through the process of signing up for the service are searched for a match. One solution to this problem is to have users register in multiple services. This is problematic because it can be expensive and time consuming for users. Further, the user must then visit all of the services to monitor the search progress: this inefficiency may cause users to give up on the search process.

Another problem is that the search results of these services contain many irrelevant entities to the searcher. This costs the user of the service time and may deter them from continuing through all of the search results.

Another problem is that large numbers of unwanted communication requests can become a nuisance to the user. Too many nuisance requests may deter the user from further use of the system. Users with the most attractive profiles are oftentimes the ones that receive the most unwanted attention. If the users with the most attractive profiles cease to use the system, the quality of the user pool deteriorates,

SUMMARY

In one embodiment, a method for profile matching comprises receiving a plurality of user profiles, each user profile

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comprising traits of a respective user. It also comprises receiving a preference indication for a first user profile of the plurality of user profiles. It further comprises determining a potential match user profile of the plurality of user profiles based on the preference indication for the first user profile. The method also comprises presenting the potential match user profile to a second user.

Receiving a preference indication for a first user profile may include receiving from a third user a recommendation of the first user profile for the second user. It may also include receiving from the second user a preference indication for the first user profile. The method may further include determining a score of a third user profile of the plurality of user profiles as a potential match for the second user. It may also include altering the score of the third user profile based on the preference indication for the first user profile.

In another embodiment, a method for profile matching comprises receiving a plurality of user profiles, each user profile comprising traits of a respective user. The method further comprises receiving a request for matches from a first user, the first user associated with a first user profile. The method also comprises scoring the plurality of user profiles for potential matching with the first user based on comparisons of the plurality of user profiles with the first user profile. It also comprises identifying a second user profile of the plurality of user profiles as a potential match for the first user based on the scoring. The method further comprises identifying commonality between a third user profile of the plurality of user profiles and the second user profile. In addition, the method comprises presenting to the first user the third user profile as a potential match for the first user.

Depending on the specific features implemented, particular embodiments may exhibit some, none, or all of the following technical advantages. Various embodiments may be capable of dynamically updating match search results based on user activity. Some embodiments may be capable of enhancing match search results by reducing the impact of restrictive user preferences. In addition, some embodiments may provide the ability to evaluate the attractiveness of potential matches. Various embodiments may be capable of importing user profiles from other social-networking systems. Some embodiments may be capable of generating the pool of users based on both explicit and implicit criteria derived from other social networking systems. Other technical advantages will be readily apparent to one skilled in the art from the following figures, description and claims.

BRIEF DESCRIPTION OF THE DRAWINGS

Reference is now made to the following description taken in conjunction with the accompanying drawings, wherein like reference numbers represent like parts, and which:

FIG. 1A is an overview of one embodiment of the matching system;

FIG. 1B shows the contents of the terminal from FIG. 1A;

FIG. 1C shows the contents of the matching server from FIG. 1A;

FIG. 1D is a diagram of a database from FIG. 1C showing one embodiment of how a matching server stores a pool;

FIG. 1E is a diagram of the display from FIG. 1B showing one embodiment of the presentation of search results to a user;

FIG. 1F is a diagram of the display from FIG. 1B showing one embodiment of the presentation of details of a match result entity to a user;

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FIG. 2 is a diagram depicting how a user may recommend an entity to another user, in accordance with a particular embodiment;

FIG. 3 is a diagram of the display from FIG. 1B depicting how the user may be made aware of fate characteristics the user shares with a match result entity, in accordance with a particular embodiment;

FIG. 4 is a diagram depicting how two platforms may be searched for a match, in accordance with a particular embodiment;

FIG. 5 is a flow chart indicating how a result list may be generated, in accordance with a particular embodiment;

FIG. 6 shows one embodiment of the matching system displaying to a user the profile information of a second user;

FIG. 7 is a diagram of the display from FIG. 6 showing the effect of a left swipe gesture;

FIG. 8 is a diagram of the display from FIG. 6 showing the effect of a right swipe gesture;

FIG. 9 shows the matching system displaying a match of a first user and a second user, in accordance with a particular embodiment;

FIG. 10 is a flowchart depicting a method for enabling communication between two users of the matching system of FIG. 1 based on a mutual expression of approval, in accordance with a particular embodiment;

FIG. 11 is a flowchart depicting a method for enabling communication between two users of the matching system of FIG. 1 based on a user suggested matching proposal, in accordance with a particular embodiment; and

FIGS. 12A-D depict embodiments of a user interface.

DETAILED DESCRIPTION

Referring to FIG. 1A, one embodiment of a matching system is shown. FIG. 1A is a simplified block diagram of a system 100 for facilitating an on-line dating scenario in a network environment. In other embodiments, system 100 can be leveraged to identify and to evaluate suitable candidates in other areas (e.g. hiring/employment, recruiting, real estate, general person searches, etc.). Users 14 interact with a matching server 20 through terminals 10. FIG. 1B is a diagram showing, in one embodiment, the contents of terminal 10. Terminal 10 comprises interface 16 (so that user 14 may be able to interact with terminal 10) and display 12. FIG. 1C is a diagram showing, in one embodiment, the contents of matching server 20. Matching server 20 comprises memory 26 and at least one CPU 28. Memory 26 may store multiple databases, such as databases 26a and 26b. Terminal 10 and matching server 20 are communicatively coupled via network connections 22 and network 24.

Users 14 are clients, customers, prospective customers, or entities wishing to participate in an on-line dating scenario and/or to view information associated with other participants in the system. Users 14 may also seek to access or to initiate a communication with other users that may be delivered via network 24. Users 14 may review data (such as profiles, for example) associated with other users in order to make matching decisions or elections. Data, as used herein, refers to any type of numeric, voice, video, text, or script data, or any other suitable information in any appropriate format that may be communicated from one point to another.

In one embodiment, terminal 10 represents (and is inclusive of) a personal computer that may be used to access network 24. Alternatively, terminal 10 may be representative of a cellular telephone, an electronic notebook, a laptop, a personal digital assistant (PDA), or any other suitable device (wireless or otherwise: some of which can perform web

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browsing), component, or element capable of accessing one or more elements within system 100. Interface 16, which may be provided in conjunction with the items listed above, may further comprise any suitable interface for a human user such as a video camera, a microphone, a keyboard, a mouse, or any other appropriate equipment according to particular configurations and arrangements. In addition, interface may be a unique element designed specifically for communications involving system 100. Such an element may be fabricated or produced specifically for matching applications involving a user.

Display 12, in one embodiment, is a computer monitor. Alternatively, display 12 may be a projector, speaker, or other device that allows user 14 to appreciate information that system 100 transmits.

Network 24 is a communicative platform operable to exchange data or information emanating from user 14. Network 24 could be a plain old telephone system (POTS). Transmission of information emanating from the user may be assisted by management associated with matching server 20 or manually keyed into a telephone or other suitable electronic equipment. In other embodiments, network 24 could be any packet data network offering a communications interface or exchange between any two nodes in system 100. Network 24 may alternatively be any local area network (LAN), metropolitan area network (MAN), wide area network (WAN), wireless local area network (WLAN), virtual private network (VPN), intranet, or any other appropriate architecture or system that facilitates communications in a network or telephonic environment, including a combination of any networks or systems described above. In various embodiments, network connections 22 may include, but are not limited to, wired and/or wireless mediums which may be provisioned with routers and firewalls.

Matching server 20 is operable to receive and to communicate information to terminal 10. In some embodiments, matching server 20 may comprise a plurality of servers or other equipment, each performing different or the same functions in order to receive and communicate information to terminal 10. Matching server 20 may include software and/or algorithms to achieve the operations for processing, communicating, delivering, gathering, uploading, maintaining, and/or generally managing data, as described herein. Alternatively, such operations and techniques may be achieved by any suitable hardware, component, device, application specific integrated circuit (ASIC), additional software, field programmable gate array (FPGA), server, processor, algorithm, erasable programmable ROM (EPROM), electrically erasable programmable ROM (EEPROM), or any other suitable object that is operable to facilitate such operations.

In some embodiments, user 14, using terminal 10, include user 14 submitting information to matching server 20 about user 14 as well as characteristics user 14 is seeking to be matched with. Such information may include a user handle, which may be a combination of characters that uniquely identifies user 14 to matching server 20. In various embodiments, matching server 20 may be configured to collect this information; for example, matching server 20 may be configured to ask user 14 to respond to a series of questions. Matching server 20 may be configured to receive the information submitted by user 14 and create a profile for user 14 based on that information, storing the profile in memory 26.

As an example only, consider a case where user 14 is interested in participating in an on-line dating scenario. User 14 can access the Internet via terminal 10, travel to a web site managed by matching server 20, and begin, the regis-

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tration process. As part of the registration process, matching server 20 may ask user 14 a series of questions which identifies characteristics about user 14. Thus, matching server 20 may ask about the height, weight, age, location, and ethnicity of user 14. It may also ask about the birthplace, parents, eating habits, activities, and goals of user 14. Matching server 20 may further use the registration process to discover what user 14 may be looking for in a match, such as age, weight, height, location, ethnicity, diet, education, etc. Further, matching server 20 may ask user 14 to indicate how important certain factors are when looking for a match. For example, matching server 20 may allow the user to indicate which characteristics in a potential match are a necessity. In another example, matching server 20 may ask, "How important is it that your match does not smoke?" Matching server 20 may also allow the user to indicate that certain characteristics are not important search criteria. For example, when asking user 14 about what height or weight user 14 is seeking in a match, matching server 20 may be configured to receive "not important" as a response. In yet another example, matching server 20 may allow user 14 to rate which factors are important on a numerical scale. For example, matching server 20 may ask user 14 the following: "On a scale of 1-10, how important is it that your match has the same education level as you?" In some embodiments, matching server 20 may specify that any number of questions or requested descriptions are necessary before registration may be concluded. As an example only, matching server 20 may require that user 14 communicate the sex of user 14 and the sex user 14 prefers to be matched with. After concluding the registration process, matching server 20 may store the responses of user 14 as a profile. This same process may be repeated by several different users 14, causing matching server 20 to contain a plurality of profiles.

FIG. 1D depicts an embodiment in which matching server 20 has a database 26a which contains a pool 30. Each entry in database 26a has a pool entity 30a along with information concerning that entity. In one embodiment, each pool entity 30a-e represents a user and their profile. In some embodiments, not all registered users are in pool 30. As discussed further below, matching server 20 may use a selection process for including stored profiles in pool 30. As depicted in FIG. 1D, in this embodiment, the collection of users and profiles forms pool 30 through which matching server 20 may perform various functions such as searches for matches.

Matching server 20 may be configured to search through pool 30 and present matches to user 14. In FIG. 1E, one embodiment of this presentation is depicted as occurring through display 12. In various embodiments, matches may be presented to user utilizing other communication schemes, such as electronic messages (i.e., e-mail) or text messages (i.e., utilizing SMS). In the depicted embodiment, a result list 31 is presented to user 14. A match result entity 31a in a result list 31 may be associated with a view button 33. Using interface 16, user 14 may request that matching server 20 provide more information about an entity in result list 31 by pressing the associated view button 33. Matching server 20 may then communicate to user 14 more information about that entity by retrieving the information from memory 26. In FIG. 1F, one embodiment of information that matching server 20 provides for user 14 is shown. Using display 12, user 14 views an entity from result list 31. Matching server 20 may also provide user 14 with the ability to contact the entity through a contact button 35. In one embodiment, when contact button 35 is utilized by user 14, matching server 20 may provide user 14 with contact information of the entity such as a telephone number or an e-mail address;

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in another embodiment, matching server 20 may provide user with a way to directly contact the entity, such as sending a message or providing voice or video communication between user 14 and the entity. Even further, matching server 20 may be configured to allow user 14 to express a negative preference for the entity through dislike button 36. In one embodiment, when, for example, dislike button 36 is utilized by user 14, matching server 20 may remove the entity from result list 31; in another embodiment, the entity may be removed from pool 30 of users from which matches are identified.

As an example only, consider that user 14 has submitted a search request to matching server 20. Matching server 20 may search through pool 30, identify results, and communicate result list 31 to user 14 which would contain other users for whom matching server 20 had created a profile and who were identified through a search and selection process. Next, user 14 may be interested in learning more about Jane Doe, entity 31a; thus, user 14 would click view button 33 associated with Jane Doe. Matching server 20 would receive this request and respond by displaying Jane Doe's profile (stored in memory 26), as depicted in FIG. 1F. Next, after reading the profile, user 14 may be interested in contacting Jane Doe; hence, user 14 would click contact button 35. Matching server 20 would respond by allowing user 14 enter a message that matching server 20 would then communicate to Jane Doe.

Matching server 20 may even further be configured to allow user 14 to store a match result entity; in one embodiment, the system may be configured to allow user 14 to utilize favorite button 34 that will add the desired match result entity into another list. In another embodiment, utilizing favorite button 34 will remove the associated match result entity from result list 31.

As an example only, user 14 may decide that he would like to save Jane Doe's profile so that he can review it later. User 14 may click favorite button 34, and matching server 20 may respond by placing Jane Doe's profile into a separate list. Further, matching server 20 may also remove Jane Doe from user's 14 result list 31. As a result, user 14 may see another match result entity populate result list 31. This is beneficial because it may focus user 14 on evaluating new entities rather than reevaluating previously-known entities because the entities still appear in result list 31.

In some embodiments, matching server 20 may be configured to generate pool 30 by default according to various characteristics and preferences of user 14 and other users of the system. Matching server 20 may also restrict entities from being included in pool 30 based on the status of the profile, or if user 14 has rejected or blocked an entity. Matching server 20 may also restrict entities from the pool that have blocked or rejected user 14. For example, matching server 20 may not allow profiles that are not in good standing to be included in pool 30. In other embodiments, matching server 20 may be configured to generate pool 30 by first choosing seeds. Seeds include, but are not limited to, profiles that user has sent a message to or profiles that user 14 has expressed a preference for. Each seed is then compared to other entities to determine which entities will be included in pool 30. Any suitable method can be used to determine which entities are included in pool 30. For example, any characteristics or algorithms described herein may form the basis of such a determination. As another example, a commonality score may be generated based on the comparison between each entity and the seed. In some embodiments, this commonality score can be a measure of how physically similar the users are to each other. This score

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may be generated based on the number of users that have expressed a positive preference for both the seed and the entity being compared. This score may also be generated based on whether the seed and entity have been viewed together in one session; further, the more times the seed and entity have been viewed together, the larger the commonality score. The law of large numbers may allow for a vast amount of such commonalities to be established over a few days. Testing has revealed that using such commonality scoring methods has yielded at least one physical match for 80% of users whose profile has been viewed at least once, and between and 1000 physical matches for 60% of users whose profile has been viewed at least once. Matching server 20 may be further configured to allow entities that have a commonality score above a certain threshold to become a part of pool 30. Matching server 20 may further be configured to update pool 30. In some embodiments, matching server 20 may do so by creating new seed entities based on activity by user 14, such as indicating a preference for that entity. Further, matching server may then compare the chosen seed entity with other profiles stored in matching server 20 and determine whether those profiles will be included in pool 30 using a threshold score as described above. At least one advantage realized by this embodiment is that user 14 is presented with updated potential matches which increases the likelihood of user 14 finding a suitable match. Another advantage present in certain embodiments is that these updated potential matches have a greater likelihood of compatibility with user 14 since they are chosen based on their commonality with entities user 14 has expressed a preference for.

As an example only, consider the case in which user 14 has registered, requested a search, and received from matching server 20 results list 31. Then, user 14 decides to contact Jane Doe and presses contact button 35. Aside from providing user 14 with the ability to contact Jane Doe, matching server 20 will designate Jane Doe's profile as a seed. Matching server 20 will then compare Jane Doe's profile to other profiles stored in memory 26 in order to identify other users who may be similar to Jane Doe and thus be a good match for user 14. In this example, matching server 20 will generate a commonality score for each of these comparisons and compare these scores to a preset threshold. If the commonality score is lower than the threshold, that profile will not be added to pool 30. However, if the commonality score is higher than the threshold, matching server 20 will add this profile to pool 30. As an example, further assume that the seed, Jane Doe, is being compared to another entity, Susan Smith. Based on the fact that both Susan and Jane have three users (Tom, Dick, and Harry) who have expressed a positive preference for their profiles, matching server 20 generates a commonality score of 100 for the comparison. In contrast, matching server 20 generated a commonality score of 50 for the comparison between the seed (Jane Doe) and yet another entity, Lucy Goosey. This was because only one user (Bob) had indicated a positive preference toward both Lucy and Jane. Continuing the example, matching server 20 is using a commonality threshold score of 70, which results in including Susan's profile (whose commonality score was greater than the threshold score) in pool 30 and excluding Lucy's (whose commonality score was less than the threshold score). Thus, user 14 gets the benefit of having more entities identified that may be good matches.

In some embodiments, matching server 20 may be configured to include behavioral scales. These may include multi-item scales for materialism and gender-role tradition-

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alism. Such scales may provide the advantage of improved matching through deeper appreciation for the personality of entities in the system.

In some embodiments, matching server 20 may be configured to analyze profile text for categories. It may search for a number of text strings and then associate the profile with any number of categories. As an example only, matching server 20 may add any profile to the Cat category whose text contains any of the following strings:

"cat" "cats" "cat." "cats." "cat," "cats,"

Matching server 20 may be configured to make it more likely that a profile will be in a result list if categories associated with the profile are also categories found in the user's profile who submitted the search request.

Matching server 20 may be configured to analyze one or more portions of the text of an entity's profile and generate a readability score that may be used in various ways, such as in the process of searching for matches for user 14. In some embodiments, matching server 20 may analyze factors such as, but not limited to; average number of words per sentence, total number of words with greater than three syllables, and total number of words in the profile. Matching server 20 may also concatenate all of the collected responses with a single space between them. It may further break the text into sentences, words, and syllables. From these statistics, matching server 20 may also be configured to generate a readability score by, in one embodiment, taking the average of the Flesch Kincaid Reading Ease test, the Flesch Kincaid Grade Level test, and the Gunning Fox score. Other embodiments may utilize any other combination of these or other tests to determine a readability score. In some embodiments, analyses may be used to determine the IQ of an entity, the grade level of the writing, or how nervous the entity generally is. An advantage of this embodiment may be that the system provides user 14 with a metric for determining approximate intelligence of other users. The readability score may be used, for example, in the matching process to identify potential matches.

As an example only, the Flesch Kincaid Reading Ease score may be generated by first computing the following intermediate score:

$$206.835 - (1.015 * [\text{Average Words per Sentence}]) - (84.6 * [\text{Average Syllables per Word}])$$

Then, the Flesch Kincaid Reading Ease score is determined by using the following table:

Intermediate Score Condition	Flesch Kincaid Reading Ease Score
<100	4
<91	5
<81	6
<71	7
<66	8
<61	9
<51	10
<31	13
<0	14
Else	15

The Flesch Kincaid Grade Level may be computed according to the following

$$(0.39 * [\text{Average Words Per Sentence}]) + (11.8 * [\text{Average Syllables Per Word}]) - 15.59$$

The Gunning Fox score may be computed according to the following:

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$$\left(\left[\frac{\text{Average Words Per Sentence} + ((\text{Number Of Words With More Than 3 Syllables}) / (\text{Number of Words In Entire Text})) + 100 \right] \right) * 0.4$$

As indicated, any suitable tests may be utilized in any suitable manner to determine a readability score.

In some embodiments, matching server 20 may be configured to allow a user to interact with the result list of another user. Matching server 20 may be configured to allow a user to express a preference for entities within a result list of another user, and to indicate to the other user of this preference. Thus, a user may be able to get advice from a friend regarding what other users may constitute good matches for the user and thus be able to find a better match.

As an example only, consider FIG. 1A and FIG. 2. Two users 14, Harry and Sally, are connected to matching server 20 via terminals 10. Display 12a is used by Harry while display 12b is used by Sally. Matching server 20 allows Sally to view Harry's result list 31 on her terminal in display 12b. By pressing recommend button 37, Sally may indicate a preference for one or more of the entities in result list 31. Assume Sally presses recommend button 37 associated with Jane Joe. After doing so, matching server 20 will notify Harry of Sally's preference. On Harry's display 12a, matching server 20 will cause notification 39 to appear, associating it with Jane Joe. Notification 39 will indicate to Harry that Sally has recommended Jane Los as a potential match. Harry may find Sally's preference helpful in determining which entities he should pursue further if, for example, he believes Sally understands the type of person he is looking for.

In one embodiment, matching server 20 may be configured to analyze the profiles of both user 14 and the entities in pool 30 for keywords. Matching server 20 may be configured to search through the profile of user 14 for keywords that relate to things such as activities and interests. Matching server 20 may generate a score for each entity in pool 30 based on a comparison between the list of keywords found in user's 14 profile and a similarly-generated list of keywords of each entity in pool 30. In one embodiment, this is accomplished by storing a list of words in memory 26, and using it to identify keywords in the searched profiles. In some embodiments, identified keywords may be used as a means of weighting various scores. As an example only, a profile that contains the word "God" may be weighted much differently than a profile which has merely indicated that their religious preference is Christian. In various embodiments, this may provide an advantage to user 14 in that user 14 is able to determine how similar he/she is with a potential match. In addition, the keyword analysis may be used by the system when searching and identifying matches for a user.

As an example only, consider two registered users, Harry and Sally, both of whom have profiles stored in matching server 20. Matching server 20 then analyzes each of these profiles by comparing it to a list of predefined keywords. Matching server 20 then associates each word that matched the list of keywords with each profile. Now assume that Harry performs a search. While fulfilling Harry's query, matching server 20 evaluates Sally's profile for inclusion in Harry's result list 31. This evaluation includes comparing the list of keywords found in Harry's profile to the keywords found in Sally's profile. The more keywords that Harry and Sally have in common, the more likely it will be that matching server 20 will include Sally's profile in Harry's result list 31.

In some embodiments, matching server 20 may be configured to impute a level of physical attractiveness to an entity in pool 30. Matching server 20 may be configured to monitor how frequent an entity in pool 30 has been viewed

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as well as how many times that entity has been part of a result list in order to impute the level of physical attractiveness. Matching server 20 may further be configured to generate a score based on this data. Further, in some embodiments, matching server 20 may impute physical attractiveness to an entity based on the imputed physical attractiveness scores of other entities. Matching server 20 may compute an average of the imputed physical attractiveness scores of the other entities weighted by the commonality score between each of the other entities and the present entity. Empirical data indicates that people are more likely to match with people of similar attractiveness. Thus, in many embodiments, a user may obtain an advantage in that they are able to be presented with potential matches that, according to one measurement, are as attractive as the user.

As an example only, consider a registered user, Sally, whose profile was created by matching server 20 in January. Since that time, matching server 20 has recorded the number of times Sally's profile has appeared in any user's result list 31; assume that this has occurred 10 times. Further, matching server 20 has also recorded the number of times a user has viewed Sally's profile by clicking view button 33 associated with Sally's profile; assume that this has happened 5 times. In this manner, matching server 20 has constructed a ratio that represents the imputed physical attractiveness of Sally's profile. Still further, assume that Harry, a registered user, now submits a query. Matching server 20 has evaluated the imputed physical attractiveness ratio of Harry's profile. When evaluating Sally's profile for inclusion in result list 31 returned to Harry, matching server 20 will compare the imputed physical attractiveness of Sally's profile and Harry's profile. The more similar the ratios associated with Harry and Sally's profiles are to each other, the more likely it is that Sally's profile will be selected by matching server 20 to be in Harry's result list 31. In another example, assume that Sally's profile has not been registered long enough to generate a meaningful imputed physical attractiveness ratio. Matching server 20 may then generate an imputed physical attractiveness score based on entities that Sally does have commonality scores with. This computed average may be weighted by the strength of the commonality score between Sally and each entity with whom she has a commonality score. Continuing the example, assume that Sally has a commonality score of 5 with Lucy and 10 with Julia. When matching server 20 computes the Sally's average, it will give twice as much weight to Julia's imputed physical attractiveness score than to Lucy's.

In some embodiments, matching server 20 may be configured to make an entity in result list 31 more appealing to user 14 by pointing out coincidences in the profile data that give user 14 a sense of fate with the entity. In one embodiment, matching server 20 may be configured to search for similar initials, birthplaces, birth dates, birth month, birth year, university, first names, last names, user handles, parental occupations, and keywords to identify users who may give another user a sense of fate. In other embodiments, matching server 20 may use the fate characteristics as a metric in the matching process.

As an example only, assume that Harry is a registered user who has performed a search. After matching server 20 returns a result list, Harry chooses to learn more about one of the entities in the result list and clicks view button 33. Consider FIG. 3, which is only an example of information that matching server 20 may return to Harry after clicking view button 33. In Harry's display 12, matching server 20 presents certain details about the profile. In particular,

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matching server 20 presents to Harry a fate notification 32 which points out specific similarities between the profile of the entity and Harry's profile. Reading fate notification 32 gives Harry a sense of familiarity which enhances his appreciation for the profile.

In another example, fate characteristics may be used to decide whether a profile in pool 30 is included in user's 14 result list 31. Assume that Harry is a registered user who has submitted a matching query to matching server 20. While determining which entities to include in Harry's result list, matching server 20 considers two profiles; Sally and Roxy. Sally and Harry both have the same birth date, initials, and have parents that work in the same profession. In contrast, Roxy and Harry only share the same birth place. Matching server 20 may be configured to award more points to Sally than to Roxy based on these comparisons, making it more likely that Sally's profile will be included in Harry's result list.

In some embodiments, matching server 20 may be configured to evaluate the likelihood of contact between user 14 and an entity in pool 30. Matching server 20 may be configured to compare demographic data between user 14 and pool entity 30a. In another embodiment, matching server 20 may be configured to weigh the demographic similarities and differences based on the sex of user 14. The demographic data may include, but is not limited to, age, education, ethnicity, income, and location.

As an example only, assume that Harry and Sally are registered users who have profiles in matching server 20. Harry has submitted a search request to matching server 20. While fulfilling this request, matching server 20 evaluates Sally's profile since her profile is in pool 30. As part of the evaluation, matching server 20 looks at the differences between Harry and Sally's stated age, income, education, ethnicity, and location. In this example, Harry is 10 years older than Sally, makes \$10,000 more per year, and has a Master's degree while Sally has a bachelor's degree. Even with these disparities, matching server 20 will give Sally's profile a high score which makes it more likely that Sally's profile will appear in Harry's result list. However, if it was Sally who submitted the search, and matching server 20 was evaluating Harry's profile, a different score is possible. So, if it were Sally who was 10 years older, made \$10,000 more per year, and had a Master's degree while Harry had a Bachelor's degree, matching server 20 would give a low score to Harry's profile, making it less likely that his profile would appear in Sally's result list. Matching server 20 may be configured this way because empirical data has shown that these demographic differences do not have an equivalent effect on the choices men and women make regarding matches.

In another embodiment, matching server 20 may be configured to compare the locations of user 14 and pool entity 30a in increments of ten miles. In yet another embodiment, matching server 20 may be configured to score the location comparison in light of other factors; as an example, matching system 20 may be configured to return a score consistent with a 10 mile difference in location even though there is a 50 mile difference between user 14 and pool entity 30a if user 14 and pool entity 30a have the same income, education, and age. An advantage realized in several embodiments is that it better approximates how a user evaluates entities. Entities that live further away are generally less appealing to a user; but, users may still be interested if the entity matches their preferences in other categories.

As an example only, consider a registered user, Harry, who submits a search request. While fulfilling this request,

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matching server 20 examines Sally's profile in pool 30, and determines that the stated locations of Harry's and Sally's profiles are 13 miles apart. Matching server 20 will give Sally's profile a score as if the distance between them were only 10 miles. However, in yet another example, Sally's profile may indicate that she lives 50 miles away from Harry. Yet, matching server 20 also notes that both Harry and Sally make \$100,000 per year, have Master's degrees, and that Harry and Sally are one year apart in age (Harry is older). Given these similarities, matching server 20 will give a score to Sally's profile that is consistent with a 20 mile difference in location even though they are actually 50 miles apart. In this manner, matching server 20 takes into account empirical data that shows that people searching for matches who indicate that they want to see matches who live close to them are still willing to pursue a potential match that lives far away if the potential match fits very closely with the other search criteria.

In another embodiment, matching server 20 may be configured to evaluate the age difference between user 14 and pool entity 30a using ranges as well as a sliding scale. By way of example only, matching server 20 may be configured to assign a high value to an age difference between 0 and -5, while assigning a lower value to an age difference between +2 and 0. An even lower value may be assigned to an age difference between -6 and -8. Even lower values would be assigned incrementally as the age difference increases outside of the ranges discussed. The higher the assigned value is, the more likely it will be that pool entity 30a will be included in result list 31. Yet another embodiment may apply this combination of ranges and a sliding scale but use different values and ranges depending on the sex of user 14.

As an example only, consider a situation in which a registered user, Harry, requests a search to be performed. While fulfilling this request, matching server 20 evaluates Sally's profile, which was in pool 30. As part of the evaluation, matching server 20 compares the ages of Harry and Sally, and determines that Harry is two years older than Sally; this determination leads to matching server 20 assigning, in this example, points to Sally's profile. Matching server 20 may also be configured to assign 50 points to Sally's profile had she been five years younger than Harry; but, if she had been up to two years older than Harry, matching server 20 may have been configured to assign 40 points to her profile. Matching server 20 may be further configured to assign 30 points to Sally's profile if she was 6 to 8 years younger than Harry. However, if Sally were more than 8 years younger than Harry, matching server 20 may be configured to further decrease the number of points assigned to her profile: if she was 9 years younger, then 25 points; if she was 10 years younger, 20 points; if she was 11 years younger, 15 points; etc. The more points assigned to Sally's profile, the more likely it is that her profile will appear in Harry's result list. Thus, matching server 20 may be configured to assign a score based on age difference using a combination of ranges and a sliding scale.

In another example, matching server 20 may assign scores differently if it was Sally who was searching and if it was Harry's profile that was being evaluated. In this example, matching server 20 may be configured to assign Harry's profile 50 points if he were between 1 and 5 years older than her. If he were 6 to 8 years older than her, matching server 20 may assign 45 points. If he were greater than 8 years older than her, matching server 20 may assign points in the following fashion: if he was 9 years older, 40 points would be assigned; if he was 10 years older, 35 points would be

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assigned; etc. However, if he was up to two years younger than Sally, matching server 20 may assign 50 points to his profile. If he were more than two years younger, matching server 20 may assign less points on a sliding scale: 45 points if he were 3 years younger, 40 points if he were 4 years younger, etc. The more points assigned to Harry's profile, the more like it is that his profile will appear in Sally's result list. This example illustrates how matching server 20 may be configured to take the sex of user 14 into account when scoring based on age differences.

In various embodiments, matching server 20 may be configured to evaluate the attractiveness of an entity in pool 30 through collected feedback from other users. In one embodiment, matching server 20 may present an entity to user 14, prompting user 14 to rate the attractiveness of the entity on a scale from 1-9. This range gives the advantage of having a midpoint. Matching server 20 may further be configured to collect such responses and store them; in one embodiment, matching server 20 may store the data in memory 26, using a structure such as database 26b. Matching server 20 may further be configured to compute the average of such responses for the entity, and store this number as well. In various embodiments, these values may be used in order to help in the matching process. Empirical data indicates that people are more likely to match with people of similar attractiveness. Thus, in various embodiments, users whose attractiveness rating are similar will be more likely to appear in each other's result list. Further, a user may indicate that they only want profiles in their result list whose average attractiveness rating is higher than an indicated threshold.

As an example only, assume registered user, Harry, uses terminal 10, which in this example is Harry's personal computer, and establishes communication with matching server 20. In this example, this communication occurs by Harry using a Web browser to access a Web page controlled by matching server 20. Sometime after visiting the Web page, matching server 20 may present Harry with an option to rate the physical attractiveness of other users registered with matching server 20. Using display 12 and interface 16, Harry may view profiles of registered users and rank them on a scale of 1-9 by entering the values using interface 16; in this example, interface 16 comprises a mouse and/or a keyboard. After submitting this rating, matching server 20 will associate it with the profile and store it. Matching server 20 will also allow other users to rate profiles, thereby collecting a plurality of rankings for profiles. Matching server 20 may use this data when trying to find matches for users. One example of this is that matching server 20 may allow user 14 to specify that he/she is searching for profiles which have an average rating of 6 or above. In turn, matching server 20 may populate user's 14 result list from the pool only with profiles whose average rating is at 6 or above. Another example of how matching server 20 may use this data involves making it more likely that an entity will appear in a user's result list if the entity and that user have a similar average attractiveness rating. So, if a user has an average rating of 6, then an entity with an average rating of 5 may be more likely to appear in the user's result list than an entity with an average rating of 2.

In another example, assume that Harry is a registered user and has requested a search. While fulfilling this request, matching server 20 evaluates Sally's profile. As part of this evaluation, matching server 20 notices that Sally's profile contains feedback from other users ranking the attractiveness of Sally's profile. Matching server 20, in this example, averages that data; Sally's profile average is 6. Matching

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server 20 may then examine Harry's profile to determine a similar average. If Harry's profile has an average close to 6, it will be more likely that matching server 20 will include Sally's profile in Harry's result list. If Harry's profile average is lower than 6, it will be less likely that Sally's profile will be included in Harry's result list. If Harry's profile average is greater than 6, it will be even less likely that Sally's profile will be included in Harry's result list. The more Harry's profile average deviates from that of Sally's, the less likely it will be that matching server 20 will present Sally's profile in Harry's result list.

In some embodiments, matching server 20 may be configured to analyze profile information and received activity information to construct "pairs" which link at least two profiles. These pairings may also be associated with a value that ascertains the quality of the pairing. For example, a pairing which results from one user viewing the profile of another user may be assigned a value that is less than a pairing which results from a first user viewing the profile of a second user when the second user has also viewed the first user's profile. Matching server 20 may use these pairings in order to generate search results for entities within and outside of the pairing. Each member of the pair may be used as a seed entity for generating search results for users in matching server 20. In various embodiments, an advantage may be realized as matching server 20 analyzes many of these pairs to develop dynamic results to users of the system, the results being potentially more relevant as matching server 20 leverages the interaction between users and profiles to generate search results.

Pairs may be formed from a variety of user activity received by matching server 20. This activity may include: profile views, mutual profile views, one-way double blind communication, mutual double-blind communication, declining double blind communication, one way wink, mutual wink, expressing disinterest in response to receiving a wink, one way favorite, and mutual favorite. Other suitable activity may also be received by matching server 20 and utilized as a basis for generating pairs.

For example, Harry may be a registered user who has expressed a positive preference for Sally. Matching server 20 may be configured to generate a pair which includes Harry and Sally. Matching server 20 may utilize this pair when providing search results to other users. Betty may have requested matches, and Betty may be similar to Sally. Matching server 20 may present Harry in Betty's result list as a result of the pairing between Harry and Sally. Further, Jim may have executed a search and Jim may be similar to Harry. As a result of the pairing between Sally and Harry, matching server 20 may present Sally in Jim's list of search results.

In some embodiments, matching server 20 may be configured to encourage user 14 to interact with entities in pool 30. For example, matching server 20 may present a list of limited entities from pool 30 to user 14, but not present other entities to user 14 unless user 14 interacts with the already presented entities. Possible interaction with these entities may include viewing more information regarding the entity, expressing a positive or negative preference for the entity, and choosing to contact the entity. Other suitable forms of interaction may also be utilized. For example, matching server 20 may prompt the user with a question about the list of entities, such as asking whether or not the user likes the entity. Responses to such prompts may include "yes," "maybe," "no," "remove," and "remove other." The presented entities may be chosen using a variety of methods. For example, the presented entities may be chosen based on

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various scoring algorithms as described above. In addition, presented entities may be chosen using predictive analysis, such as logistical regression. Other techniques may be used to determine the presented entities. For example, entities that have been presented previously may be excluded. As another example, entities that have been blocked by user 14 may also be excluded. In various embodiments, a combination of these techniques as well as others may be used to determine the limited number of entities presented to user 14.

For example, Harry may be a registered user of the matching system. Matching server 20 may be configured to present to Harry a list of five entities that Harry must interact with. Once Harry has interacted with these entities, matching server 20 may present five more entities for Harry to interact with. Previously, Harry has blocked Sally, another registered user of the system. As a result, matching server 20 may exclude Sally from being presented to Harry in the list of five entities. Further, Harry has already interacted with Betty, another registered user of the system: Harry sent a message to Betty utilizing matching server 20. As a result, Betty will be excluded from being presented to Harry in the list of five entities. Matching server 20 may then choose two of the five entities using scoring algorithms described above. For example, matching server 20 may choose Alice and Amy to be presented in the list of five entities because Alice and Amy have received high scores when their profiles were compared to Harry's profile. Matching server 20 may choose the remaining three entities using predictive analysis. According to this example, matching server 20 may use logistical regression to identify Carla, Christi, and Camela as the other three entities to present to Harry. Thus, in this example, Harry is presented with a list of five entities by matching server 20. Matching server 20 may not present another set of five entities until Harry has interacted with these five entities. Harry may interact with these entities in a variety of ways. For example, Harry may send a message to Alice and send a "wink" to Amy. In addition, Harry, may choose to view more information about Carla's profile, but express a negative preference towards Christi and Camela. After matching server 20 receives these types of interaction with the presented five entities, another set of five entities may be presented to Harry.

In this example, matching server 20 may further be configured to process the user interaction provided by Harry. For example, matching server 20 may utilize Alice's profile as a seed entity to generate other possible entities to present to Harry since Harry sent a message to Alice. Thus, a benefit is from presenting a the five entities to Harry in that the interaction between Harry and these entities may be utilized by matching server 20 to generate other entities for matching to Harry. This serves as an example of how preferences may be identified based on user behavior.

In FIG. 4, one embodiment is disclosed wherein matching server 20, with pool 30, may be configured to interact with another platform, such as social networking platform 50, containing a set 52 of users. Users 14 are communicatively coupled to matching server 20 and social networking platform 50. Matching server 20 may further be configured to provide users of social networking platform 50 a service by which they may search for users within set 52 or within pool 30 using the algorithms and processing of matching server 20. Matching server 20 may even further be configured to allow users of matching server 20 to search through pool 30 and set 52. Matching server 20 may be configured to parse the profiles of the entities in set 52, collecting data and applying algorithms.

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In another embodiment, matching server 20 may be configured to allow users of social networking platform to interact with matching server 20 using social networking platform 50. This level of integration provides the advantage of users not having to learn and sign up for a different platform.

Social networking platform 50, in one embodiment, may be a service which stores profiles of its users. This service may be further configured to provide access to the stored profiles. In one embodiment, social networking platform 50 may also allow other services to interact with users of social networking platform 50 through social networking platform 50.

In one embodiment, matching server 20 may be configured to collect requests from users of social networking platform 50 and perform a search through pool and set 52. Matching server 20 may further be configured to present the results of this search from within social networking platform 50. Matching server 20 may further be configured to present entities in the search result from pool 30 as if they were entities of set 52; in one embodiment, matching server 20 may be configured to generate profiles of entities from pool 30 into set 52. Thus, users of social networking platform 50 may view all of the entities in the search result, regardless of their source (either from pool 30 or set 52), within the environment of social networking platform 50.

As an example only, consider two users: Harry, for whom matching server 20 has created a profile, and Sally, who has a profile stored in social networking platform 50. From within social networking platform 50, matching server 20 presents to Sally the ability to perform a search which Sally uses. The results of this search are presented to Sally within social networking platform 50. In this example, Harry's profile is displayed to Sally as a search result along with other entities from set 52 though Harry's profile was from pool 30. In this example, matching server 20 uses the algorithms discussed herein and searches through the profiles stored in pool 30 and set 52. In order to display Harry's profile to Sally, matching server 20 creates a profile in set 52 using the data stored in Harry's profile in pool 30. Sally is then able to interact with this newly created profile from within social networking platform 50 in the same manner as she is other entities in set 52.

In another embodiment, matching server 20 may be configured to allow its users to interact with social networking platform 50 through matching server 20. In one embodiment, matching server 20 supplements pool 30 with set 52. In yet another embodiment, entities from set 52 appear as entities of pool 30 to the user in their list of search results. In one embodiment, matching server 20 may be configured to generate profiles within pool 30 from entities of set 52; the system may be configured to do so through capabilities provided by social networking platform 50, such as an application programming interface.

As an example only, consider two users: Harry, whose profile is stored in matching server 20, and Sally, whose profile is stored in social networking platform 50. Harry submits a search request to matching server 20. Matching server 20 may return result list 31 to Harry, which, in this example, contains an entity representing Sally's profile. Matching server 20 may accomplish this by creating profiles in pool 30 that correspond to the profiles found in set 52. Once these profiles have been imported into pool 30, matching server 20 may then search through pool 30. While doing so, matching server 20 applies the algorithms and scores discussed herein. Thus, in this example, matching server 20 has been configured to both search and apply scoring

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algorithms to entities in pool 30 and set 52. Further, in one example, Harry is not able to distinguish that Sally's profile was originally stored in social networking platform 50. Rather, matching server 20 presents Sally's profile in the same manner as other profiles stored in pool 30. Thus, in this example, Harry may use favorite button 34, view button 33, and contact button 35 when interacting with Sally's profile in the same manner as described above.

One advantage present in various embodiments is that a user has a wider pool of entities to search through. Another advantage is that a user does not have to sign up with several platforms to search through the users on those platforms.

FIG. 5 is a flowchart illustrating one embodiment of how result list 31 may be generated. At step 62, matching server 20 generates pool 30, as described above. At step 64, matching server 20 applies a filter to pool 30, removing certain entities; in various embodiments, this filter is based on user's 14 own sex and the sex user 14 desires to be matched with. At step 66, matching server 20 may be configured to apply algorithms to pool 30 that will generate a plurality of scores for each entity in pool 30. In one embodiment, these algorithms may include analyzing the text of the profiles of the entities in pool 30 to generate a readability score, determining how attractive an entity of pool 30 is, or measuring how likely it is that user 14 will contact an entity of pool 30. At step 68, matching server 20 may be configured to collect all of the scores from step 66; in one embodiment, matching server 20 may use database 26b to store all of these scores. At step 70, matching server 20 may be configured to apply an ordering algorithm which will determine the order in which entities in result list 31 are presented to user 14. In one embodiment, this ordering algorithm is based, in part, on the scoring algorithms applied at step 66. The ordering algorithm assigns points to each entity and orders them based on these values, constructing result list 31. An embodiment of this ordering algorithm is summarized in the following table:

Condition	Number of Points for Ordering
Readability score 1 point higher than user	+33554432
Match result entity has expressed a preference for the user	+16777216
Match result entity has been recommended by a friend of the user	+8388608
User has viewed the details of match result entity	+2097152
Match result entity has commonality with an entity user has expressed a preference for	+1048576
Both have the same ambition	+128
Both have the same beliefs	+16384
Same answer for Build	+64
Same answer for Car	+1
Both have the same diet	+4
Both have the same preference for drinking alcohol	+131072
Same answer for Ethnicity	+1024
Same answer for Fear	+256
Same answer for Hair	+2
Same answer for Number of children	+524288
Same answer for morning	+32
Same answer for "must have"	+32768
Same answer for "night out"	+16

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-continued

Condition	Number of Points for Ordering
Same answer for "pets"	+65536
Same answer for politics	+8192
Same answer for relationship status	+0
Same answer for "romance"	+512
Same answer for smoking preferences	+262144
Same answer for sports interests	+8
Same answer for "system"	+4096

As an example only, consider a registered user, Harry, who desires to perform a search. Before processing the request, matching server 20 may ask Harry what sex he is and what sex does he desire to be matched with; in this example, Harry responds that he is a male seeking a female. After doing so, matching server 20 will generate pool 30 as described above. Next, matching server 20 will apply a filter to remove certain entities from pool 30. In this example, all males will be removed from pool 30 since Harry is seeking a female. Further, all females seeking females will be removed from pool 30 since Harry is a male. In other examples, other entities that are removed from pool 30 include entities that Harry has expressed a negative preference for before, or entities that have expressed a negative preference for Harry. After pool 30 has been filtered, matching server applies a variety of scoring algorithms to the entities remaining in pool 30. These algorithms may account for various comparisons such as those based on readability, likelihood to contact, fate, and keywords described above. Matching server 20 will then tabulate these scores, storing them, in this example, in database 26b. Matching server 20 will then determine what order these entities are presented to Harry by applying an ordering algorithm. Here, matching server 20 assigns one ordering score to each entity by examining the results of the scoring algorithms. After doing so, matching server will present result list 31 to Harry, where the order of the entities that appear in the result list is based on the ordering algorithm. In this example, it is possible for result list 31 to change. Consider another user, Sally, who appears in Harry's result list. If Harry decides to add her into a separate list by using favorite button 34, Sally will be removed from result list 31 (as described above). However, Sally will also become a seed entity from which entities may be added to pool 30 (as described above). Hence, matching server 20 will update the pool, apply the filters, apply the scoring algorithms, tabulate the results, apply the ordering algorithm, and update result list 31. As another example, an entity may update their profile which can change result list 31. For example, assume Sally's profile had an ordering algorithm score that placed her within the top 20 entities in result list 31. Sally then changes her profile which results in keywords that match Harry's profile being added to her profile. Matching server 20 will then update her scoring algorithms. In this example, the change in Sally's profile and resulting increase in keyword matches with Harry's profile significantly increased her score. This was then reflected in the ordering algorithm as it was also applied to the updated profile. Afterwards, Sally's profile is now placed within the top 5 entities in result list 31.

In some embodiments, matching server 20 may be configured to receive required characteristics from user 14 regarding a match. User 14 may be allowed to specify such restrictions based upon any number of characteristics,

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including those described herein. For example, matching server 20 may allow user 14 to specify that entities that indicate they have children should not be displayed. In another example, user 14 may specify that only entities between the ages of 20 and 30 should be present in result list 31. In some embodiments, matching server 20 may implement these restrictions in step 64 of FIG. 5 in other embodiments, however, matching server 20 may refuse to apply these restrictions to certain entities based on the characteristics of the entities. Any number of characteristics, including those described herein, may form the basis upon which matching server 20 decides not to apply the restrictions submitted by user 14. As an example only, matching server 20 may ignore the restrictions if the entity has a high enough attractiveness rating. In another example, though user 14 has requested that no profiles which are located more than 50 miles away should be present in result list 31, matching server 20 may include such profiles because those profiles have over 5 matching keywords, a high attractiveness rating, and have specified the same life goals as user 14. Thus, in some embodiments, matching server 20 may refuse to apply restrictions submitted by user 14 based on any combination of characteristics or algorithms.

An advantage present in many embodiments is that through taking into account various factors when scoring potential matches and using only very few strict filters, a large amount of result entities may be returned to the user. A further advantage is that the ordering algorithm will put the most relevant search results first, saving the user time.

FIGS. 6-9 depict embodiments of a user interface presented to users of the matching system discussed above with respect to FIGS. 1 and 4. According to some embodiments, users 14 interact with matching server 20 through interface 16 presented by terminal 10. In addition to the embodiments of interface 16 described above in relation to FIG. 1A, interface 16 may also comprise a touch screen interface operable to detect and receive touch input such as a tap or a swiping gesture. In some embodiments, matching server 20 may import profiles from other social networking systems. This level of integration provides the advantage of users only having to update their profile information in one place. For example, when user 14 updates his profile within social networking platform 50, matching server 20 is also able to access the updated profile information.

In some embodiments, matching server 20 may further be configured, as part of the user registration process, to link to a user's existing profile within social networking platform 50. Matching server 20 may be configured to parse the profiles of the users in set 52, e.g., collecting data and applying algorithms. For example, matching server 20 may use explicit signals from social networking platform 50 such as common friends, common interests, common network, location, gender, sexuality, or age to evaluate potential matches between users 14. Matching server 20 may also use implicit signals such as for whom a user 14 expresses approval and disapproval. Implicit signals may also include facial recognition algorithms to detect ethnicity, hair color, eye color, etc., of profiles that user 14 has expressed interest in.

In particular embodiments, matching server 20 may have users 14 to link their user profiles to an existing profile within social networking platform 50. Matching server 20 may be configured to generate and add profiles to user profile pool 30 from entities of set 52; the system may be configured to do so through capabilities provided by social networking platform 50, such as an application programming interface. One advantage of linking is that matching

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server 20 can use the authentication features provided by social networking platform 50. For example, creating a user profile on matching server 20 containing false information becomes harder when the information must come from another verifiable and peer monitored source such as social networking platform 50.

In some embodiments, matching server 20 may allow a user 14 to propose a match between two of his connections within social networking platform 50. For example, Harry may be friends with both Bob and Sally within social networking platform 50. Harry believes Bob and Sally are a good match and therefore instructs matching server 20 to create a match between the two users in user profile pool 30. Once matched, matching server 20 allows Harry and Sally to communicate with each other.

In some embodiments, matching server 20 may be configured to apply a relevance algorithm which determines the content and order in which matching server 20 displays potential matches to user 14. A relevance algorithm may be based on both explicit and implicit signals from user 14. Explicit signals include information entered by user 14 as part of its user profile, such as height, weight, age, location, income, and ethnicity. Explicit signals may also include information about the characteristics user 14 is seeking in a match, such as gender, hair color, eye color, or occupation. Explicit signals may also be entered by user 14 as part of a search request. For example, user 14 may request matching server 20 limit the pool of potential matches to those users within a fixed geographic region. Matching server 20 is operable to compare geographic positions associated with the plurality of user profiles in user profile pool 30 with a geographic position associated with user 14. Explicit signals may be imported from a social networking platform 50, such as the number of shared entities in a social graph of user 14. Implicit signals may be based on the behavior of user 14 either within system 100 or other social networking platforms 50. For example, if user 14 has expressed disapproval of a user profile in the past, matching server 20 may no longer present the disapproved of user profile to user 14 in future searches. In various embodiments, matching server 20 may be configured to evaluate the attractiveness of a user in user profile pool 30 through collected feedback from other users. For example, matching server 20 may rank a user profile that receives more likes as more relevant than a user profile that receives fewer likes. In particular embodiments, matching server 20 may assign a higher relevance to a user profile if the other user has previously expressed a preference for user 14. As an example, user Harry may have previously expressed a preference for user Sally. If Sally requests a set of user profiles from matching server 20, and Harry's user profile is included in the set, matching server 20 may assign Harry's user profile a higher relevance based on his expression of preference for Sally. This can result in Harry's profile being presented to Sally sooner than otherwise would have occurred. This may be advantageous in that it can increase the chances of a match without compromising a user's feelings of privacy when expressing preferences for potential matches. In some embodiments, matching server 20 may be configured to use the fate characteristics as a metric in the relevance algorithm.

In some embodiments, terminal 10 is operable to determine its own geographic location by a global positioning satellite navigational system. Terminal 10 may also determine its own geographic location using cellphone-based triangulation techniques. Wi-Fi based positioning system. Global Positioning Satellite (GPS) system, or network addresses assigned by a service provider.

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FIG. 6 shows one embodiment of system 100 displaying to a user the profile information of a second user. Matching server 20 may be configured to search through its plurality of profiles and present suggested matches to user 14. In FIG. 6, one embodiment of this presentation is depicted as occurring through the display of terminal 10. In this embodiment, a plurality of user profiles is presented to user 14. Using terminal 10, user 14 may request that matching server 20 present a subset of users from user profile pool 30 based on specified search parameters. The display may show an image of a suggested user and one or more aspects of the suggested user's profile information. In some embodiments, the combination of image and one or more aspects of profile information is displayed as "card" 88 representing the suggested user. A set of suggested users may be displayed as stack of cards 88. User 14 may view information regarding one suggested user at a time or more than one of the suggested users at a time. User 14 may be presented with a summary of information regarding a suggested user. The summary may include one or more of: a picture, an icon, name, location information, gender, physical attributes, hobbies, or other profile information.

In some embodiments, terminal 10 may also display "information" button 84 which allows user 14 to request matching server 20 to retrieve and display more information about the presented user from user profile pool 30. In addition, user 14 may express approval or disapproval for a presented user. Expressing approval or disapproval can be accomplished through various methods. For example, terminal 10 may display "like" button 86 (represented by a green heart icon) and "dislike" button (represented by a red "X" icon). Pressing like button 86 indicates to matching server 20 that user 14 approves of and is interested in communication with the presented user. Pressing dislike button 82 indicates that user 14 disapproves of and does not want to communicate with the presented user. The approval preference of user 14 is anonymous in that matching server 20 does not inform users 14 whether other users have expressed approval or disapproval for them.

As an example, consider two registered users, Harry and Sally, both of whom have profiles stored in matching server 20. Harry is at a restaurant and requests matching server 20 to present him users within a one-mile radius of his location. Matching server 20 compares a geographic position associated with Sally with a geographic position associated with Harry. If Sally is currently within the one-mile radius of Harry and matching server 20 determines her profile information matches Harry's preferences, matching server 20 will present Harry one or more aspects of Sally's profile information. If other users also meet the search criteria, matching server 20 will present one or more aspects of those users' profile information as well. Harry may request more information about Sally by pressing information button 84. Harry may also indicate his preference to communicate directly with Sally by selecting like button 86. In another example, Harry may expand his search to a twenty-five mile radius to meet people in his town, not just his immediate vicinity.

FIGS. 7 and 8 are diagrams of embodiments of the display from FIG. 6 showing the effect of a left swipe gesture (FIG. 7) and the effect of a right swipe gesture (FIG. 8). In one embodiment, users 14 may navigate through the set of presented users by swiping through stack of cards 88. Users 14 may also express approval of a presented user by performing a right swipe gesture or express disapproval by performing a left swipe gesture. In some embodiments, user 14 performs a swiping gesture by moving a finger or other

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suitable object across a screen of terminal 10. Other suitable gestures or manners of interacting with terminal 10 may be used (e.g., tapping on portions of a screen of terminal 10).

In some embodiments, matching server 20 creates a match between two users 14 after both users 14 have expressed a preference for each other's profiles using like button 86 or the swiping gesture associated with like button 86. When matching server 20 creates a match, it may also provide the matched users with the ability to contact each other through a contact button. In some embodiments, when a match is created, matching server 20 may immediately (or soon thereafter) present an option to users 14 that have been matched to engage in a communication session (e.g., a chat, an SMS message, an e-mail, a telephone call, a voice communication session, a video communication session). This may be done in response to a first user 14 expressing a preference for a second user 14 that has already expressed a preference for the first user 14.

FIG. 9 shows one embodiment of matching system 100 displaying a match of a first user and a second user, in accordance with a particular embodiment. Matching server 20 may provide first user 14 and second user 14 with each other's contact information such as a telephone number or an e-mail address. Matching server 20 may also provide both first and second users 14 with a way to directly contact the other, such as sending a message or providing voice or video communication between the first and second user. In some embodiments, direct communication may be initiated by pressing "Send a Message" button 92. Alternatively, a user may choose to continue browsing the set of presented users by pressing "Keep Playing" button 94.

For example, user Harry may indicate a preference to communicate directly with user Sally by selecting like button 86. At this point, Sally is not aware that Harry expressed a preference for her. If Sally also requests matching server 20 present her with a set of possible matches, Harry may appear in her set. Sally may select like button 86 (or perform an associated swiping gesture) when viewing Harry's profile. Matching server 20 may then notify both Harry and Sally that a match occurred. At this point, both Harry and Sally are made aware that they each expressed approval of each other's profile. Matching server 20 then enables Harry and Sally to directly communicate with each other (e.g., through a private chat interface).

In some embodiments, one advantage of a system disclosing preferences of profiles to users when mutual approval has occurred is that a user can feel more secure in their privacy knowing that their preferences will be disclosed to those that have expressed a preference for that user. As an example, a user can avoid embarrassment if their expression of preference for a profile was not reciprocated. This may lead to users more actively expressing their preferences. Such increased activity can be used by the matching system to generate more potential matches or better rankings of potential matches. In some embodiments, matching server 20 may be configured to allow direct communication between users when there has been a mutual expression of preference. This may be advantageous because users can avoid browsing, deleting, or responding to unwanted messages.

FIG. 10 is a flowchart depicting a method for enabling communication between two users of the matching system of FIG. 1 based on a mutual expression of approval, in accordance with a particular embodiment.

At step 1002, in some embodiments, matching server 20 generates a set of user profiles in response to a request for matching from a first user 14. At step 1004, matching server

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20 presents the set of user profiles to first user 14. Matching server 20 determines the contents and ordering of the set of users profiles by using, e.g., the relevance algorithms described above in the discussion of FIG. 4. For example, matching server 20 may only include user profiles whose contents indicate location within a specified geographical radius and order the presentation of those user profiles based on the number of mutual friends in common with first user 14.

At step 1006, in some embodiments, matching server 20 receives an indication of the preference of first user 14 regarding a presented user profile. Matching server determines if first user 14 expresses approval or disapproval of the presented user profile at step 1008. If first user 14 disapproves of the presented user profile then a match is not made and, at step 1016, matching server 20 will not allow communication between the two users. If first user 14 expresses approval for the presented user profile at step 1008, then matching server 20 will check if second user 14 represented by the presented user profile has already expressed a preference for first user 14 at step 1010. If matching server 20 detects a mutual expression of approval then a match is made between first and second users 14. Then, at step 1012, matching server 20 allows private communications between first and second users 14. If a mutual expression of approval is not detected at step 1010, then matching server 20 stores the preference of first user 14 regarding the presented user profile for future comparison and continues to step 1016 where private communications are not yet allowed.

FIG. 11 is a flowchart depicting a method for enabling communication between two users of the matching system of FIG. 1 based on a matching proposal suggested by a user, in accordance with a particular embodiment. At step 1102, matching server 20 receives interactions from first user 14. Interactions from first user 14 may include identification of user profiles for two other users 14. For example, Harry is connected to both Bob and Sally within social networking platform 50. Harry believes Bob and Sally are a good match for each other and generates a matching proposal requesting matching server 20 to create a match between Bob and Sally.

At step 1104, in some embodiments, matching server validates the suggested matching proposal between second and third users 14. For example, matching server 20 verifies that Bob's profile indicates that he wants to be matched with a woman, and Sally's profile indicates that she wants to be matched with a man. Matching server may also verify that Sally has not previously expressed disapproval for Bob. If matching server 20 determines the suggested matching proposal is valid, matching server 20 creates the match and allows communication between the users 14 suggested to be matched at step 1106. If matching server 20 determines the suggested matching proposal is not valid, matching server 20 does not create a match and does not allow communication between second and third users 14 at step 1108. In some embodiments, step 1104 may not be performed. For example, if a matching proposal is suggested, then matching server 20 may perform step 1106 with respect to the users suggested to be matched.

FIGS. 12A-D depict embodiments of a user interface. In some embodiments, the interface allows user 14 of terminal 10 to enable communication between other users 14 by suggesting a matching proposal to matching server 20.

FIG. 12A illustrates one embodiment of an interface for proposing a match between two users. The interface is divided into three sections: connection list area 1202, search area 1204, and suggestion area 1206. Connection list area

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1202 displays a set of connections user 14 has with other users of, e.g., system 100 of FIG. 1. Connections may be based on prior matches created by matching server 20. Connections may also be imported from another social networking platform 50. Search area 1204 enables user 14 to search for particular connections within system 100. In some embodiments, the search may be limited to just the connections displayed in connection list area 1202. Suggestion area 1206 displays the connections that user 14 may use to form a suggested match.

FIG. 12B illustrates suggestion area 1206 displaying a first selected user (i.e., "Jonathan Smith") of a proposed match between two users. User 14 identifies the first selected user through a set of interactions with connection list area 1202, search area 1204, and suggestion area 1206. For example, user 14 may locate a connection in connection list area 1202 by typing a user handle in search area 1204. User 14 may then add the connection to suggestion area 1206. In some embodiments, user 14 may drag the connection from connection list area 1202 to suggestion area 1206.

FIG. 12C illustrates suggestion area 1206 displaying a proposed match between two suggested users (i.e., "Jonathan Smith" and "Mary Major"). For example, user 14 may locate a second connection in connect list area 1202 that user 14 believes is a match for the first connection. User 14 may add the second connection to suggestion area 1206. When both connections are added to suggestion area 1206, matching server 20 may create a match between the two users and allow communication between them.

FIG. 12D illustrates an example communication interface between users of the matching system. User 14 is presented with chat box 1208 for each of the matches that exist for user 14. Users 14 may communicate with each other through chat box 1208. In some embodiments, users 14 may communicate through SMS messages, e-mail, telephone calls, online voice communication sessions, and/or video communication sessions.

Modifications, additions, or omissions may be made to the methods described herein (such as those described above with respect to FIGS. 5, 10 and 11) without departing from the scope of the disclosure. For example, the steps may be combined, modified, or deleted where appropriate, and additional steps may be added. Additionally, the steps may be performed in any suitable order without departing from the scope of the present disclosure.

Although several embodiments have been illustrated and described in detail, it will be recognized that substitutions and alterations are possible without departing from the spirit and scope of the appended claims.

What is claimed is:

1. A computer implemented method of profile matching, comprising:

electronically receiving a plurality of user online-dating profiles, each profile comprising traits of a respective user and associated with a social networking platform; electronically receiving a first request for matching, the first request electronically submitted by a first user using a first electronic device;

determining a set of potential matches from the plurality of user online-dating profiles for the first user in response to receiving the first request;

causing the display of a graphical representation of a first potential match of the set of potential matches to the first user on a graphical user interface of the first electronic device, the first potential match corresponding to a second user;

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determining that the first user expressed a positive preference indication regarding the first potential match at least by determining that the first user performed a first swiping gesture associated with the graphical representation of the first potential match on the graphical user interface;

in response to determining that the first user expressed the positive preference indication regarding the first potential match, automatically causing the graphical user interface to display a graphical representation of a second potential match of the set of potential matches instead of the graphical representation of the first potential match;

determining that the second user has expressed a positive preference indication regarding the first user after determining that the first user expressed the positive preference indication regarding the first potential match;

determining to enable communication between the first user and the second user in response to determining that both the first user has expressed the positive preference indication regarding the second user and the second user has expressed the positive preference indication regarding the first user;

in response to determining to enable communication between the first user and the second user, causing the graphical user interface to display to the first user both the graphical representation of the first potential match;

determining that the first user expressed a negative preference indication regarding a second potential match of the set of potential matches at least by determining that the first user performed a second swiping gesture associated with a graphical representation of the second potential match on the graphical user interface, the second swiping gesture different than the first swiping gesture, the second potential match corresponding to a third user;

determining to prevent communication between the first user and the third user in response to determining that both the first user has expressed the positive preference indication regarding the second user and the second user has expressed the positive preference indication regarding the first user;

determining that the first user expressed a positive preference indication regarding a third potential match of the set of potential matches at least by determining that the first user performed the first swiping gesture associated with a graphical representation of the third potential match on the graphical user interface, the third potential match corresponding to a fourth user; and

determining to prevent communication between the first user and the fourth user in response to determining that the fourth user has expressed a negative preference indication regarding the first user.

2. The method of claim 1, further comprising:

in response to determining that both the first user has expressed the positive preference indication regarding the second user and the second user has expressed the positive preference indication regarding the first user, causing the display of a graphical notification, on the graphical user interface of the first electronic device, that a match exists between the first user and the second user, the graphical notification comprising a user interface control enabling the text area to be presented to the first user.

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3. The method of claim 1, wherein the set of potential matches for the first user comprises one or more potential matches that are each associated with a geographic location within a threshold distance of a geographic location associated with the first user, the threshold distance being a stored value.

4. A non-transitory computer-readable medium comprising instructions that, when executed by a processor, are configured to:

electronically receive a plurality of user online-dating profiles, each profile comprising traits of a respective user and associated with a social networking platform;

electronically receive a first request for matching, the first request electronically submitted by a first user using a first electronic device;

determine a set of potential matches from the plurality of user online-dating profiles for the first user in response to receiving the first request;

cause the display of a graphical representation of a first potential match of the set of potential matches to the first user on a graphical user interface of the first electronic device, the first potential match corresponding to a second user;

determine that the first user expressed a positive preference indication regarding the first potential match at least by determining that the first user performed a first swiping gesture associated with the graphical representation of the first potential match on the graphical user interface;

in response to the determination that the first user expressed the positive preference indication regarding the first potential match, automatically cause the graphical user interface to display a graphical representation of a second potential match of the set of potential matches instead of the graphical representation of the first potential match;

determine that the second user has expressed a positive preference indication regarding the first user after determining that the first user expressed the positive preference indication regarding the first potential match;

determine to enable communication between the first user and the second user in response to the determination that both the first user has expressed the positive preference indication regarding the second user and the second user has expressed the positive preference indication regarding the first user;

in response to the determination to enable communication between the first user and the second user, cause the graphical user interface to display to the first user both the graphical representation of the first potential match;

determine that the first user expressed a negative preference indication regarding a second potential match of the set of potential matches at least by determining that the first user performed a second swiping gesture associated with a graphical representation of the second potential match on the graphical user interface, the second swiping gesture different than the first swiping gesture, the second potential match corresponding to a third user;

determine to prevent communication between the first user and the third user in response to determining that both the first user has expressed the positive preference indication regarding the second user and the second user has expressed the positive preference indication regarding the first user;

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determine that the first user expressed a positive preference indication regarding a third potential match of the set of potential matches at least by determining that the first user performed the first swiping gesture associated with a graphical representation of the third potential match on the graphical user interface, the third potential match corresponding to a fourth user; and

determine to prevent communication between the first user and the fourth user in response to determining that the fourth user has expressed a negative preference indication regarding the first user.

5. The medium of claim 4, further comprising instructions configured to, in response to the determination that both the first user has expressed the positive preference indication regarding the second user and the second user has expressed the positive preference indication regarding the first user, cause the display of a graphical notification, on the graphical user interface of the first electronic device, that a match exists between the first user and the, second user, the graphical notification comprising a user interface control enabling the text area to be presented to the first user.

6. The medium of claim 4, wherein the set of potential matches for the first user comprises one or more potential matches that are each associated with a geographic location within a threshold distance of a geographic location associated with the first user, the threshold distance being a stored value.

7. A system for profile matching, comprising:
an interface operable to:

electronically receive a plurality of user online-dating profiles, each profile comprising traits of a respective user and associated with a social networking platform;
electronically receive a plurality of user online-dating profiles, each profile comprising traits of a respective user and associated with a social networking platform;
electronically receive a first request for matching, the first request electronically submitted by a first user using a first electronic device; and

a processor coupled to the interface and operable to:
determine a set of potential matches from the plurality of user online-dating profiles for the first user in response to receiving the first request;

cause the interface to display a graphical representation of a first potential match of the set of potential matches to the first user on a graphical user interface of the first electronic device, the first potential match corresponding to a second user;

determine that the interface has received a positive preference indication from the first user regarding the first potential match at least by determining that the first user performed a first swiping gesture associated with the graphical representation of the first potential match on the graphical user interface;

automatically cause the interface to remove the presentation of the first potential match from the graphical user interface in response to detecting the gesture and cause the interface to present, on the graphical user interface, a second potential match of the set of potential matches to the first user;

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determine that the second user has expressed a positive preference indication regarding the first user after determining that the first user expressed the positive preference indication regarding the first potential match; and

determine to enable communication between the first user and the second user in response to the determination that both the first user has expressed the positive preference indication regarding the second user and the second user has expressed the positive preference indication regarding the first user;

in response to the determination to enable communication between the first user and the second user, cause the graphical user interface to display to the first user both the graphical representation of the first potential match;

determine that the first user expressed a negative preference indication regarding a second potential match of the set of potential matches at least by determining that the first user performed a second swiping gesture associated with a graphical representation of the second potential match on the graphical user interface, the second swiping gesture different than the first swiping gesture, the second potential match corresponding to a third user;

determine to prevent communication between the first user and the third user in response to determining that both the first user has expressed the positive preference indication regarding the second user and the second user has expressed the positive preference indication regarding the first user;

determine that the first user expressed a positive preference indication regarding a third potential match of the set of potential matches at least by determining that the first user performed the first swiping gesture associated with a graphical representation of the third potential match on the graphical user interface, the third potential match corresponding to a fourth user; and

determine to prevent communication between the first user and the fourth user in response to determining that the fourth user has expressed a negative preference indication regarding the first user.

8. The system of claim 7, the processor further operable to, in response to the determination that both the first user has expressed the positive preference indication regarding the second user and the second user has expressed the positive preference indication regarding the first user, cause the display of a graphical notification, on the graphical user interface of the first electronic device, that a match exists between the first user and the second user, the graphical notification comprising a user interface control enabling the text area to be presented to the first user.

9. The system of claim 7, wherein the set of potential matches for the first user comprises one or more potential matches that are each associated with a geographic location within a threshold distance of a geographic location associated with the first user, the threshold distance being a stored value.

* * * * *

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : 9,733,811 B2
APPLICATION NO. : 14/059192
DATED : August 15, 2017
INVENTOR(S) : Sean Rad et al.

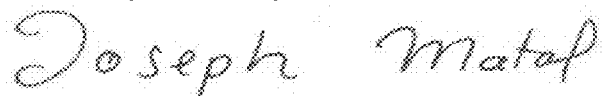
Page 1 of 2

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Claims

Column 25, Line 20, after "enable" insert --initial--.
Column 25, Line 26, after "enable" insert --initial--.
Column 25, Line 28, after second reference of "user", delete "both".
Column 25, Line 31, after "regarding a", delete "second" and insert --third--.
Column 25, Line 34, after "of the", delete "second" and insert --third--.
Column 25, Line 37, after "the", delete "second" and insert --third--.
Column 25, Line 39, delete "determining to prevent" and insert --preventing--.
Column 25, Line 40, delete "in response to" and insert --after--.
Column 25, Line 41, delete "both".
Column 25, Line 41, delete "positive" and insert --negative--.
Column 25, Line 42, after "the", delete "second user and the second".
Column 25, Line 43, delete "user has expressed the positive preference indication".
Column 25, Line 44, delete "regarding the first" and insert --third--.
Column 25, Line 46, after "regarding a", delete "third" and insert --fourth--.
Column 25, Line 49, after "representation of the", delete "third" and insert --fourth--.
Column 25, Line 51, before "potential match", delete "third" and insert --fourth--.
Column 25, Line 53, delete "determining to prevent" and insert --preventing--.
Column 25, Line 54, delete "in response to" and insert --after--.
Column 26, Line 43, after "enable" insert --initial--.
Column 26, Line 49, after "enable" insert --initial--.
Column 26, Line 51, after "first user", delete "both".
Column 26, Line 54, after "regarding a", delete "second" and insert --third--.
Column 26, Line 57, after "representation of the", delete "second" and insert --third--.
Column 26, Line 60, after "the", delete "second" and insert --third--.
Column 26, Line 62, delete "determine to".
Column 26, Line 63, delete "in response to" and insert --after--.
Column 26, Line 64, delete "both".

Signed and Sealed this
Twenty-first Day of November, 2017



Joseph Matal
*Performing the Functions and Duties of the
Under Secretary of Commerce for Intellectual Property and
Director of the United States Patent and Trademark Office*

CERTIFICATE OF CORRECTION (continued)

Page 2 of 2

U.S. Pat. No. 9,733,811 B2

Column 26, Line 64, delete “positive” and insert --negative--.

Column 26, Line 65, delete “second user and the second”.

Column 26, Line 66, delete “user has expressed the positive preference indication”.

Column 26, Line 67, delete “regarding the first” and insert --third--.

Column 27, Line 2, delete “third” and insert --fourth--.

Column 27, Line 5, delete “third” and insert --fourth--.

Column 27, Line 6, delete “third” and insert --fourth--.

Column 27, Line 8, delete “determine to”.

Column 27, Line 9, delete “in response to” and insert --after--.

Column 27, Line 19, after “first user and the” delete “,”.

Column 27, Line 33, delete “electronically receive a plurality of user online-dating”.

Column 27, Line 34, delete “profiles, each profile comprising traits of a respective”.

Column 27, Line 35, delete “user and associated with a social networking platform;”.

Column 28, Line 6, after “enable”, insert --initial--.

Column 28, Line 12, after “enable”, insert --initial--.

Column 28, Line 14, after “first user”, delete “both”.

Column 28, Line 17, after “regarding a”, delete “second” and insert --third--.

Column 28, Line 20, after “representation of the”, delete “second” and insert --third--.

Column 28, Line 23, after “gesture, the”, delete “second” and insert --third--.

Column 28, Line 25, delete “determine to”.

Column 28, Line 26, delete “in response to” and insert --after--.

Column 28, Line 27, delete “both”.

Column 28, Line 27, after “expressed the”, delete “positive” and insert --negative--.

Column 28, Line 28, delete “second user and the second”.

Column 28, Line 29, delete “user has expressed the positive preference indication”.

Column 28, Line 30, delete “regarding the first” and insert --third--.

Column 28, Line 32, delete “third” and insert --fourth--.

Column 28, Line 35, delete “third” and insert --fourth--.

Column 28, Line 36, delete “third” and insert --fourth--.

Column 28, Line 38, delete “determine to”.

Column 28, Line 39, delete “in response to” and insert --after--.

Column 28, Line 50, after “control enabling”, delete “the” and insert --a--.

Exhibit B

(12) **United States Design Patent** (10) **Patent No.:** **US D798,314 S**
Rad et al. (45) **Date of Patent:** **** Sep. 26, 2017**

(54) **DISPLAY SCREEN OR PORTION THEREOF
WITH A GRAPHICAL USER INTERFACE OF
A MOBILE DEVICE**

D598,928 S * 8/2009 Hirsch D14/485
D608,365 S * 1/2010 Walsh D14/485
D611,052 S * 3/2010 Bamford D14/485
D611,486 S * 3/2010 Hirsch D14/485
D615,549 S 5/2010 Caine et al.

(Continued)

(71) Applicant: **Tinder, Inc.**, West Hollywood, CA (US)

(72) Inventors: **Sean Rad**, Los Angeles, CA (US);
Jonathan Badeen, North Hollywood,
CA (US); **Christopher Paul
Gulczynski**, Los Angeles, CA (US)

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(Continued)

(73) Assignee: **Tinder, Inc.**, West Hollywood, CA (US)

(**) Term: **15 Years**

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(21) Appl. No.: **29/560,811**

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(22) Filed: **Apr. 11, 2016**

(Continued)

Related U.S. Application Data

(63) Continuation-in-part of application No. 29/465,628,
filed on Aug. 29, 2013, now Pat. No. Des. 755,814.

(51) **LOC (10) Cl.** **14-04**

(52) **U.S. Cl.**
USPC **D14/485**

(58) **Field of Classification Search**
USPC D14/485-495
CPC G06F 3/048; G06F 3/0481; G06F 3/04812;
G06F 3/04815; G06F 3/04817; G06F
3/0482; G06F 3/0483; G06F 3/0484;
G06F 3/044; G06F 3/0417

See application file for complete search history.

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D596,193 S * 7/2009 Shotel D14/486
D598,466 S * 8/2009 Hirsch D14/485

Primary Examiner — Melanie H Tung

Assistant Examiner — Bao-Yen Nguyen

(74) *Attorney, Agent, or Firm* — Baker Botts L.L.P.

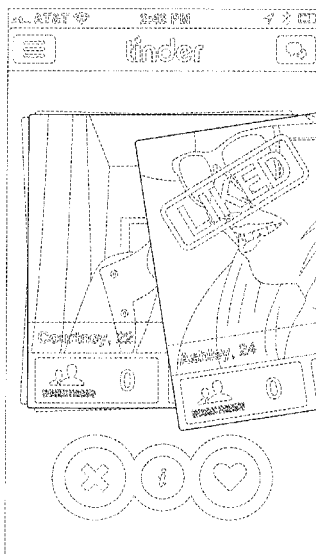
(57) **CLAIM**

The ornamental design for a display screen or portion
thereof with a graphical user interface of a mobile device, as
shown and described.

DESCRIPTION

FIG. 1 is a front view of a first embodiment of a display
screen with a graphical user interface of a mobile device;
and,
FIG. 2 is a front view of a second embodiment of a display
screen with a graphical user interface of a mobile device.
The broken lines illustrating components of a web page are
for illustrative purpose only and form no part of the claimed
design.

1 Claim, 2 Drawing Sheets



US D798,314 S

Page 2

(56)

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U.S. Patent

Sep. 26, 2017

Sheet 1 of 2

US D798,314 S

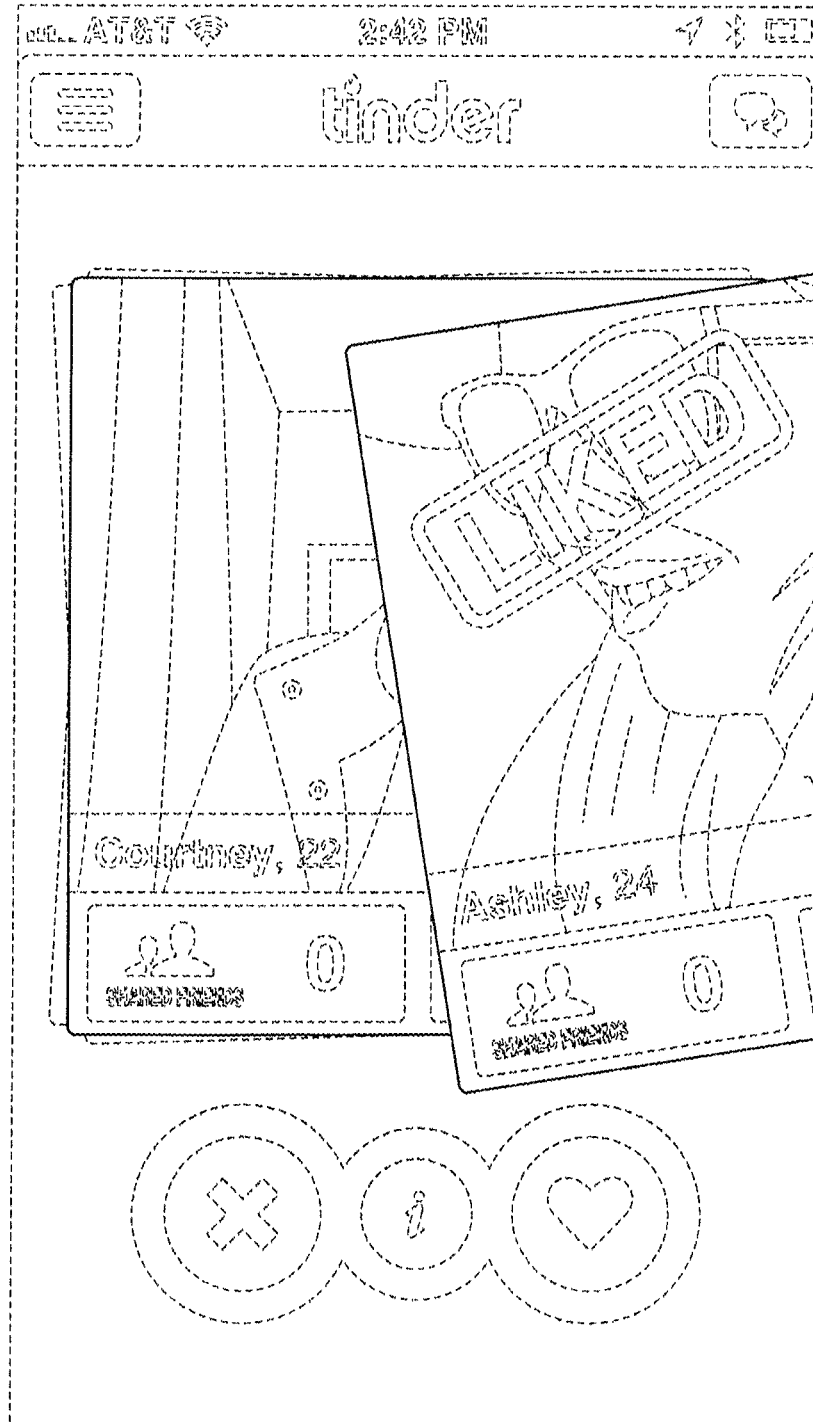


FIG. 1

U.S. Patent

Sep. 26, 2017

Sheet 2 of 2

US D798,314 S

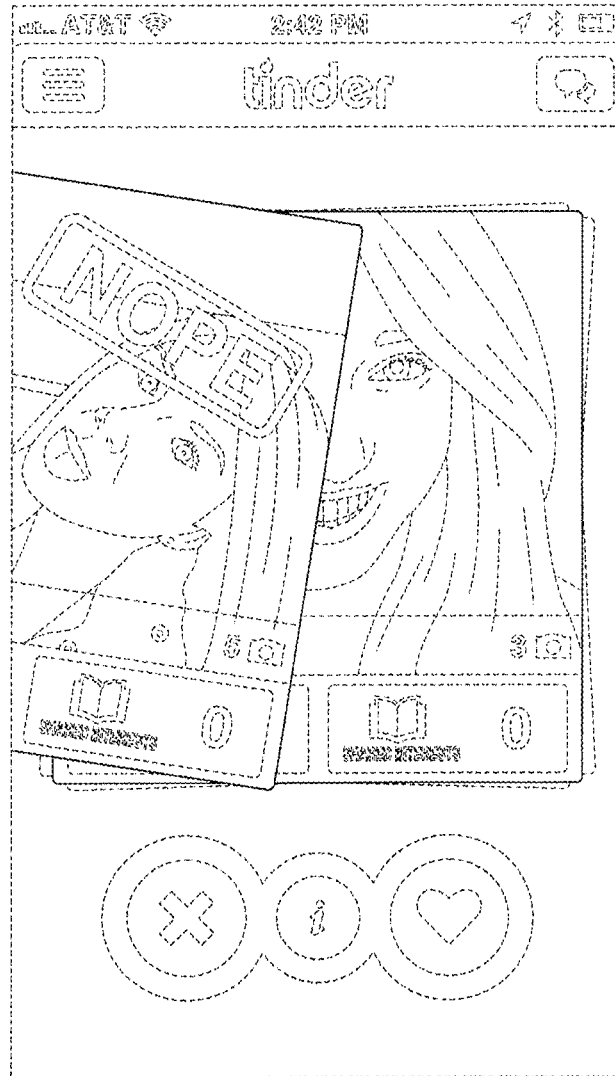


FIG. 2

Exhibit C

United States of America
United States Patent and Trademark Office

SWIPE

Reg. No. 4,465,926

Registered Jan. 14, 2014

New Cert. Apr. 7, 2015

Int. Cl.: 9

TRADEMARK

PRINCIPAL REGISTER

TINDER, INC. (DELAWARE CORPORATION)
P.O. BOX 25458
DALLAS, TX 75225

FOR: COMPUTER APPLICATION SOFTWARE FOR MOBILE DEVICES, NAMELY, SOFTWARE FOR SOCIAL INTRODUCTION AND DATING SERVICES, IN CLASS 9 (U.S. CLS. 21, 23, 26, 36 AND 38).

FIRST USE 4-8-2013; IN COMMERCE 4-8-2013.

THE MARK CONSISTS OF STANDARD CHARACTERS WITHOUT CLAIM TO ANY PARTICULAR FONT, STYLE, SIZE, OR COLOR.

SER. NO. 85-950,991, FILED 6-5-2013.



Michelle K. Lee

Director of the United States
Patent and Trademark Office

**REQUIREMENTS TO MAINTAIN YOUR FEDERAL
TRADEMARK REGISTRATION**

**WARNING: YOUR REGISTRATION WILL BE CANCELLED IF YOU DO NOT FILE THE
DOCUMENTS BELOW DURING THE SPECIFIED TIME PERIODS.**

Requirements in the First Ten Years*
What and When to File:

First Filing Deadline: You must file a Declaration of Use (or Excusable Nonuse) between the 5th and 6th years after the registration date. *See* 15 U.S.C. §§1058, 1141k. If the declaration is accepted, the registration will continue in force for the remainder of the ten-year period, calculated from the registration date, unless cancelled by an order of the Commissioner for Trademarks or a federal court.

Second Filing Deadline: You must file a Declaration of Use (or Excusable Nonuse) **and** an Application for Renewal between the 9th and 10th years after the registration date.*
See 15 U.S.C. §1059.

Requirements in Successive Ten-Year Periods*
What and When to File:

You must file a Declaration of Use (or Excusable Nonuse) **and** an Application for Renewal between every 9th and 10th-year period, calculated from the registration date.*

Grace Period Filings*

The above documents will be accepted as timely if filed within six months after the deadlines listed above with the payment of an additional fee.

***ATTENTION MADRID PROTOCOL REGISTRANTS:** The holder of an international registration with an extension of protection to the United States under the Madrid Protocol must timely file the Declarations of Use (or Excusable Nonuse) referenced above directly with the United States Patent and Trademark Office (USPTO). The time periods for filing are based on the U.S. registration date (not the international registration date). The deadlines and grace periods for the Declarations of Use (or Excusable Nonuse) are identical to those for nationally issued registrations. *See* 15 U.S.C. §§1058, 1141k. However, owners of international registrations do not file renewal applications at the USPTO. Instead, the holder must file a renewal of the underlying international registration at the International Bureau of the World Intellectual Property Organization, under Article 7 of the Madrid Protocol, before the expiration of each ten-year term of protection, calculated from the date of the international registration. *See* 15 U.S.C. §1141j. For more information and renewal forms for the international registration, see <http://www.wipo.int/madrid/en/>.

NOTE: Fees and requirements for maintaining registrations are subject to change. Please check the USPTO website for further information. With the exception of renewal applications for registered extensions of protection, you can file the registration maintenance documents referenced above online at <http://www.uspto.gov>.

NOTE: A courtesy e-mail reminder of USPTO maintenance filing deadlines will be sent to trademark owners/holders who authorize e-mail communication and maintain a current e-mail address with the USPTO. To ensure that e-mail is authorized and your address is current, please use the Trademark Electronic Application System (TEAS) Correspondence Address and Change of Owner Address Forms available at <http://www.uspto.gov>.

The JS 44 civil cover sheet and the information contained herein neither replace nor supplement the filing and service of pleadings or other papers as required by law, except as provided by local rules of court. This form, approved by the Judicial Conference of the United States in September 1974, is required for the use of the Clerk of Court for the purpose of initiating the civil docket sheet. (SEE INSTRUCTIONS ON NEXT PAGE OF THIS FORM.)

I. (a) PLAINTIFFS

Match Group, LLC

(b) County of Residence of First Listed Plaintiff Dallas
(EXCEPT IN U.S. PLAINTIFF CASES)

(c) Attorneys (Firm Name, Address, and Telephone Number)
John P. Palmer - Naman, Howell, Smith & Lee, PLLC, 400 Austin Ave.,
8th Floor, P.O. Box 1470, Waco, Texas 76701 (254) 755-4100

DEFENDANTS

Bumble Trading Inc.

County of Residence of First Listed Defendant _____
(IN U.S. PLAINTIFF CASES ONLY)

NOTE: IN LAND CONDEMNATION CASES, USE THE LOCATION OF
THE TRACT OF LAND INVOLVED.

Attorneys (If Known)

II. BASIS OF JURISDICTION (Place an "X" in One Box Only)

- ☐ 1 U.S. Government Plaintiff
- ☒ 3 Federal Question
(U.S. Government Not a Party)
- ☐ 2 U.S. Government Defendant
- ☐ 4 Diversity
(Indicate Citizenship of Parties in Item III)

III. CITIZENSHIP OF PRINCIPAL PARTIES (Place an "X" in One Box for Plaintiff and One Box for Defendant)

- | | PTF | DEF | | PTF | DEF |
|---|----------------------------|----------------------------|---|----------------------------|----------------------------|
| Citizen of This State | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | Incorporated or Principal Place of Business In This State | <input type="checkbox"/> 4 | <input type="checkbox"/> 4 |
| Citizen of Another State | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | Incorporated and Principal Place of Business In Another State | <input type="checkbox"/> 5 | <input type="checkbox"/> 5 |
| Citizen or Subject of a Foreign Country | <input type="checkbox"/> 3 | <input type="checkbox"/> 3 | Foreign Nation | <input type="checkbox"/> 6 | <input type="checkbox"/> 6 |

IV. NATURE OF SUIT (Place an "X" in One Box Only)Click here for: [Nature of Suit Code Descriptions.](#)

CONTRACT	TORTS	FORFEITURE/PENALTY	BANKRUPTCY	OTHER STATUTES	
<input type="checkbox"/> 110 Insurance <input type="checkbox"/> 120 Marine <input type="checkbox"/> 130 Miller Act <input type="checkbox"/> 140 Negotiable Instrument <input type="checkbox"/> 150 Recovery of Overpayment & Enforcement of Judgment <input type="checkbox"/> 151 Medicare Act <input type="checkbox"/> 152 Recovery of Defaulted Student Loans (Excludes Veterans) <input type="checkbox"/> 153 Recovery of Overpayment of Veteran's Benefits <input type="checkbox"/> 160 Stockholders' Suits <input type="checkbox"/> 190 Other Contract <input type="checkbox"/> 195 Contract Product Liability <input type="checkbox"/> 196 Franchise	PERSONAL INJURY <input type="checkbox"/> 310 Airplane <input type="checkbox"/> 315 Airplane Product Liability <input type="checkbox"/> 320 Assault, Libel & Slander <input type="checkbox"/> 330 Federal Employers' Liability <input type="checkbox"/> 340 Marine <input type="checkbox"/> 345 Marine Product Liability <input type="checkbox"/> 350 Motor Vehicle <input type="checkbox"/> 355 Motor Vehicle Product Liability <input type="checkbox"/> 360 Other Personal Injury <input type="checkbox"/> 362 Personal Injury - Medical Malpractice	PERSONAL INJURY <input type="checkbox"/> 365 Personal Injury - Product Liability <input type="checkbox"/> 367 Health Care/Pharmaceutical Personal Injury Product Liability <input type="checkbox"/> 368 Asbestos Personal Injury Product Liability PERSONAL PROPERTY <input type="checkbox"/> 370 Other Fraud <input type="checkbox"/> 371 Truth in Lending <input type="checkbox"/> 380 Other Personal Property Damage <input type="checkbox"/> 385 Property Damage Product Liability	<input type="checkbox"/> 625 Drug Related Seizure of Property 21 USC 881 <input type="checkbox"/> 690 Other LABOR <input type="checkbox"/> 710 Fair Labor Standards Act <input type="checkbox"/> 720 Labor/Management Relations <input type="checkbox"/> 740 Railway Labor Act <input type="checkbox"/> 751 Family and Medical Leave Act <input type="checkbox"/> 790 Other Labor Litigation <input type="checkbox"/> 791 Employee Retirement Income Security Act IMMIGRATION <input type="checkbox"/> 462 Naturalization Application <input type="checkbox"/> 465 Other Immigration Actions	<input type="checkbox"/> 422 Appeal 28 USC 158 <input type="checkbox"/> 423 Withdrawal 28 USC 157 PROPERTY RIGHTS <input type="checkbox"/> 820 Copyrights <input checked="" type="checkbox"/> 830 Patent <input type="checkbox"/> 835 Patent - Abbreviated New Drug Application <input type="checkbox"/> 840 Trademark SOCIAL SECURITY <input type="checkbox"/> 861 HIA (1395ff) <input type="checkbox"/> 862 Black Lung (923) <input type="checkbox"/> 863 DIWC/DIWW (405(g)) <input type="checkbox"/> 864 SSID Title XVI <input type="checkbox"/> 865 RSI (405(g)) FEDERAL TAX SUITS <input type="checkbox"/> 870 Taxes (U.S. Plaintiff or Defendant) <input type="checkbox"/> 871 IRS—Third Party 26 USC 7609	<input type="checkbox"/> 375 False Claims Act <input type="checkbox"/> 376 Qui Tam (31 USC 3729(a)) <input type="checkbox"/> 400 State Reapportionment <input type="checkbox"/> 410 Antitrust <input type="checkbox"/> 430 Banks and Banking <input type="checkbox"/> 450 Commerce <input type="checkbox"/> 460 Deportation <input type="checkbox"/> 470 Racketeer Influenced and Corrupt Organizations <input type="checkbox"/> 480 Consumer Credit <input type="checkbox"/> 490 Cable/Sat TV <input type="checkbox"/> 850 Securities/Commodities/Exchange <input type="checkbox"/> 890 Other Statutory Actions <input type="checkbox"/> 891 Agricultural Acts <input type="checkbox"/> 893 Environmental Matters <input type="checkbox"/> 895 Freedom of Information Act <input type="checkbox"/> 896 Arbitration <input type="checkbox"/> 899 Administrative Procedure Act/Review or Appeal of Agency Decision <input type="checkbox"/> 950 Constitutionality of State Statutes
REAL PROPERTY <input type="checkbox"/> 210 Land Condemnation <input type="checkbox"/> 220 Foreclosure <input type="checkbox"/> 230 Rent Lease & Ejectment <input type="checkbox"/> 240 Torts to Land <input type="checkbox"/> 245 Tort Product Liability <input type="checkbox"/> 290 All Other Real Property	CIVIL RIGHTS <input type="checkbox"/> 440 Other Civil Rights <input type="checkbox"/> 441 Voting <input type="checkbox"/> 442 Employment <input type="checkbox"/> 443 Housing/Accommodations <input type="checkbox"/> 445 Amer. w/Disabilities - Employment <input type="checkbox"/> 446 Amer. w/Disabilities - Other <input type="checkbox"/> 448 Education	PRISONER PETITIONS Habeas Corpus: <input type="checkbox"/> 463 Alien Detainee <input type="checkbox"/> 510 Motions to Vacate Sentence <input type="checkbox"/> 530 General <input type="checkbox"/> 535 Death Penalty Other: <input type="checkbox"/> 540 Mandamus & Other <input type="checkbox"/> 550 Civil Rights <input type="checkbox"/> 555 Prison Condition <input type="checkbox"/> 560 Civil Detainee - Conditions of Confinement			

V. ORIGIN (Place an "X" in One Box Only)

- ☒ 1 Original Proceeding ☐ 2 Removed from State Court ☐ 3 Remanded from Appellate Court ☐ 4 Reinstated or Reopened ☐ 5 Transferred from Another District (specify) ☐ 6 Multidistrict Litigation - Transfer ☐ 8 Multidistrict Litigation - Direct File

VI. CAUSE OF ACTION

Cite the U.S. Civil Statute under which you are filing (Do not cite jurisdictional statutes unless diversity):

35 U.S.C. § 271

Brief description of cause:

Patent Infringement, Trademark Infringement, Unfair Competition, Misappropriation of Trade Secrets

VII. REQUESTED IN COMPLAINT:

☐ CHECK IF THIS IS A CLASS ACTION UNDER RULE 23, F.R.Cv.P. DEMAND \$

CHECK YES only if demanded in complaint:

JURY DEMAND: ☒ Yes ☐ No**VIII. RELATED CASE(S) IF ANY**

(See instructions):

JUDGE _____

DOCKET NUMBER _____

DATE

03/16/2018

SIGNATURE OF ATTORNEY OF RECORD

/s/ John P. Palmer

FOR OFFICE USE ONLY

RECEIPT # _____

AMOUNT _____

APPLYING IFP _____

JUDGE _____

MAG. JUDGE _____

Case 3:18-cv-02578-K Document 1-1 Filed 09/26/18 Page 86 of 86 PageID 97
INSTRUCTIONS FOR ATTORNEYS COMPLETING CIVIL COVER SHEET FORM JS 44

Authority For Civil Cover Sheet

The JS 44 civil cover sheet and the information contained herein neither replaces nor supplements the filings and service of pleading or other papers as required by law, except as provided by local rules of court. This form, approved by the Judicial Conference of the United States in September 1974, is required for the use of the Clerk of Court for the purpose of initiating the civil docket sheet. Consequently, a civil cover sheet is submitted to the Clerk of Court for each civil complaint filed. The attorney filing a case should complete the form as follows:

- I.(a) Plaintiffs-Defendants.** Enter names (last, first, middle initial) of plaintiff and defendant. If the plaintiff or defendant is a government agency, use only the full name or standard abbreviations. If the plaintiff or defendant is an official within a government agency, identify first the agency and then the official, giving both name and title.
 - (b) County of Residence.** For each civil case filed, except U.S. plaintiff cases, enter the name of the county where the first listed plaintiff resides at the time of filing. In U.S. plaintiff cases, enter the name of the county in which the first listed defendant resides at the time of filing. (NOTE: In land condemnation cases, the county of residence of the "defendant" is the location of the tract of land involved.)
 - (c) Attorneys.** Enter the firm name, address, telephone number, and attorney of record. If there are several attorneys, list them on an attachment, noting in this section "(see attachment)".
- II. Jurisdiction.** The basis of jurisdiction is set forth under Rule 8(a), F.R.Cv.P., which requires that jurisdictions be shown in pleadings. Place an "X" in one of the boxes. If there is more than one basis of jurisdiction, precedence is given in the order shown below.
- United States plaintiff. (1) Jurisdiction based on 28 U.S.C. 1345 and 1348. Suits by agencies and officers of the United States are included here.
- United States defendant. (2) When the plaintiff is suing the United States, its officers or agencies, place an "X" in this box.
- Federal question. (3) This refers to suits under 28 U.S.C. 1331, where jurisdiction arises under the Constitution of the United States, an amendment to the Constitution, an act of Congress or a treaty of the United States. In cases where the U.S. is a party, the U.S. plaintiff or defendant code takes precedence, and box 1 or 2 should be marked.
- Diversity of citizenship. (4) This refers to suits under 28 U.S.C. 1332, where parties are citizens of different states. When Box 4 is checked, the citizenship of the different parties must be checked. (See Section III below; **NOTE: federal question actions take precedence over diversity cases.**)
- III. Residence (citizenship) of Principal Parties.** This section of the JS 44 is to be completed if diversity of citizenship was indicated above. Mark this section for each principal party.
- IV. Nature of Suit.** Place an "X" in the appropriate box. If there are multiple nature of suit codes associated with the case, pick the nature of suit code that is most applicable. Click here for: [Nature of Suit Code Descriptions](#).
- V. Origin.** Place an "X" in one of the seven boxes.
- Original Proceedings. (1) Cases which originate in the United States district courts.
- Removed from State Court. (2) Proceedings initiated in state courts may be removed to the district courts under Title 28 U.S.C., Section 1441. When the petition for removal is granted, check this box.
- Remanded from Appellate Court. (3) Check this box for cases remanded to the district court for further action. Use the date of remand as the filing date.
- Reinstated or Reopened. (4) Check this box for cases reinstated or reopened in the district court. Use the reopening date as the filing date.
- Transferred from Another District. (5) For cases transferred under Title 28 U.S.C. Section 1404(a). Do not use this for within district transfers or multidistrict litigation transfers.
- Multidistrict Litigation – Transfer. (6) Check this box when a multidistrict case is transferred into the district under authority of Title 28 U.S.C. Section 1407.
- Multidistrict Litigation – Direct File. (8) Check this box when a multidistrict case is filed in the same district as the Master MDL docket.
- PLEASE NOTE THAT THERE IS NOT AN ORIGIN CODE 7.** Origin Code 7 was used for historical records and is no longer relevant due to changes in statute.
- VI. Cause of Action.** Report the civil statute directly related to the cause of action and give a brief description of the cause. **Do not cite jurisdictional statutes unless diversity.** Example: U.S. Civil Statute: 47 USC 553 Brief Description: Unauthorized reception of cable service
- VII. Requested in Complaint.** Class Action. Place an "X" in this box if you are filing a class action under Rule 23, F.R.Cv.P.
- Demand. In this space enter the actual dollar amount being demanded or indicate other demand, such as a preliminary injunction.
- Jury Demand. Check the appropriate box to indicate whether or not a jury is being demanded.
- VIII. Related Cases.** This section of the JS 44 is used to reference related pending cases, if any. If there are related pending cases, insert the docket numbers and the corresponding judge names for such cases.

Date and Attorney Signature. Date and sign the civil cover sheet.